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INCOMES IN POSTWAR EUROPE: A STUDY OF POLICIES, GROWTH AND DISTRIBUTION

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INCOMES IN POSTWAR EUROPE: A STUDY OF POLICIES, GROWTH AND DISTRIBUTION

(ECONOMIC SURVEY OF EUROPE IN 1965: Part 2)

Prepared by the

SECRETARIAT OF THE
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GENEVA, 1967

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NOTICE TO READERS

This volume constitutes Part 2 of the *Economic Survey of Europe in 1965*. Part 1 of the SURVEY, entitled “The European Economy in 1965”, was published in 1966 under the symbol E/ECE/613.

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Prefatory Note

This study is one of a series of reports prepared by the secretariat of the Economic Commission for Europe and published in the annual *Economic Survey of Europe* and *Economic Bulletin for Europe.* The purpose of these studies is to serve the needs of the Commission and to help in the task of reporting on world economic conditions, which the Economic and Social Council of the United Nations has entrusted to the Department of Economic and Social Affairs.

The present study is published as Part 2 of the *Economic Survey of Europe in 1965*. Earlier studies in this series dealt with " Some factors in economic growth in Europe during the 1950s " (published in 1964 as Part 2 of the *Economic Survey of Europe in 1961*), and " Economic Planning in Europe " (published in 1965 as Part 2 of the *Economic Survey of Europe in 1962*).

In preparing the present report, the secretariat has been able to draw upon the knowledge and experience of the International Labour Office, whose secretariat has contributed to the following sections of the study: the development of pay bargaining procedures and incomes policy in certain western European countries (in Chapter 4); the analysis of social security systems as instruments for income redistribution in both western and eastern Europe (in Chapters 6 and 9); the role of trade unions in eastern Europe (Chapter 8); and the discussion of " capital sharing " schemes (Chapter 1).

The study is published on the responsibility of the secretariat of the Economic Commission for Europe, and the views expressed in it should not be attributed to the Commission or to its participating governments.

Most of the study was written during 1966 and is based upon information available up to the end of that year.

Geneva, March 1967

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EXPLANATORY NOTES

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of the frontiers of any country or territory.

The following symbols have been used :

.. = not available or not pertinent;

— = nil or negligible;

* = estimate by the secretariat of the Economic Commission for Europe.

In referring to combinations of years, the use of an oblique stroke — e.g. 1959/60 — signifies a twelve-month period (say from 1 July 1959 to 30 June 1960). The use of a hyphen — e.g. 1958-1960 — normally signifies either an average of, or a total for, the full period of calendar years covered (including the end years indicated).

The definition of " billion" used throughout is one thousand million. Minor discrepancies in totals and percentages are due to rounding.

Certain data for the Federal Republic of Germany relate to its territory and also to West Berlin, where separate figures are not available.

INTRODUCTION

This is a study of problems and policies of income generation, distribution and redistribution in European market economies, centrally planned economies and Yugoslavia. The scope of the study is very broad; the analysis deals with factor shares and major aggregates of final demand as well as with the distribution of personal incomes by individual earners and by households. Many problems are not fully discussed; attention is focused on issues which are in the centre of interest for policy-makers and which lend themselves to economic or statistical analysis. Certain aspects can be discussed almost exclusively in economic terms, while others can be understood only against the background of institutional and social facts; these include the politically predominant views in various societies on the relative priorities to be attached to economic efficiency and future economic growth, on the one hand, and to social equity and present welfare on the other.

Whatever the economic and social system, the fundamental processes of income generation and distribution can be described, to a great extent, in similar terms; the major and significant exceptions arise from the difference between private and social ownership of property and its implications for the relevant income flows. Many of the aims of incomes policy can also be formulated in similar language. In all economies, policy must have regard to three objectives: the realization of some principle of "equity" in remuneration of labour; the stimulation of economic growth, implying some kind of incentives for efficient economic performance; and the maintenance of balance in the economy. These three types of objective — of which the interpretation can differ substantially — may well be in conflict with each other, and any policy for incomes must represent a compromise between them.

It is obvious that between the centrally planned and market economies there are very marked differences of emphasis in the problems presented to policy makers, and great differences, too, in the range of administrative instruments at hand for solving them. In the centrally planned economies, incomes policies must be regarded as springing directly from the central strategy for structural change in the course of social and economic development. The planning of the level of total incomes, and of income distribution, are integral parts of the whole process of economic and social planning. Thus, the change in total household incomes is geared to the planned allocation of resources for supplying consumer goods and services. In the market economies, by contrast, incomes policies may be considered as an "optional" instrument which may be more or less preferable to, and more or less effective than, the alternative methods of seeking to influence private decisions; in practice, the main emphasis has been on short-term changes in prices and pay. In the centrally planned economies, a major problem of incomes policy has been to lay down the rules which would result in promoting the desired allocation of resources. In the market economies the problem is, rather, semi-political — that of persuading enterprises and trade unions to observe and enforce certain standards in determining pay and prices, and of bringing about the economic and social conditions in which these standards are most likely to win assent.

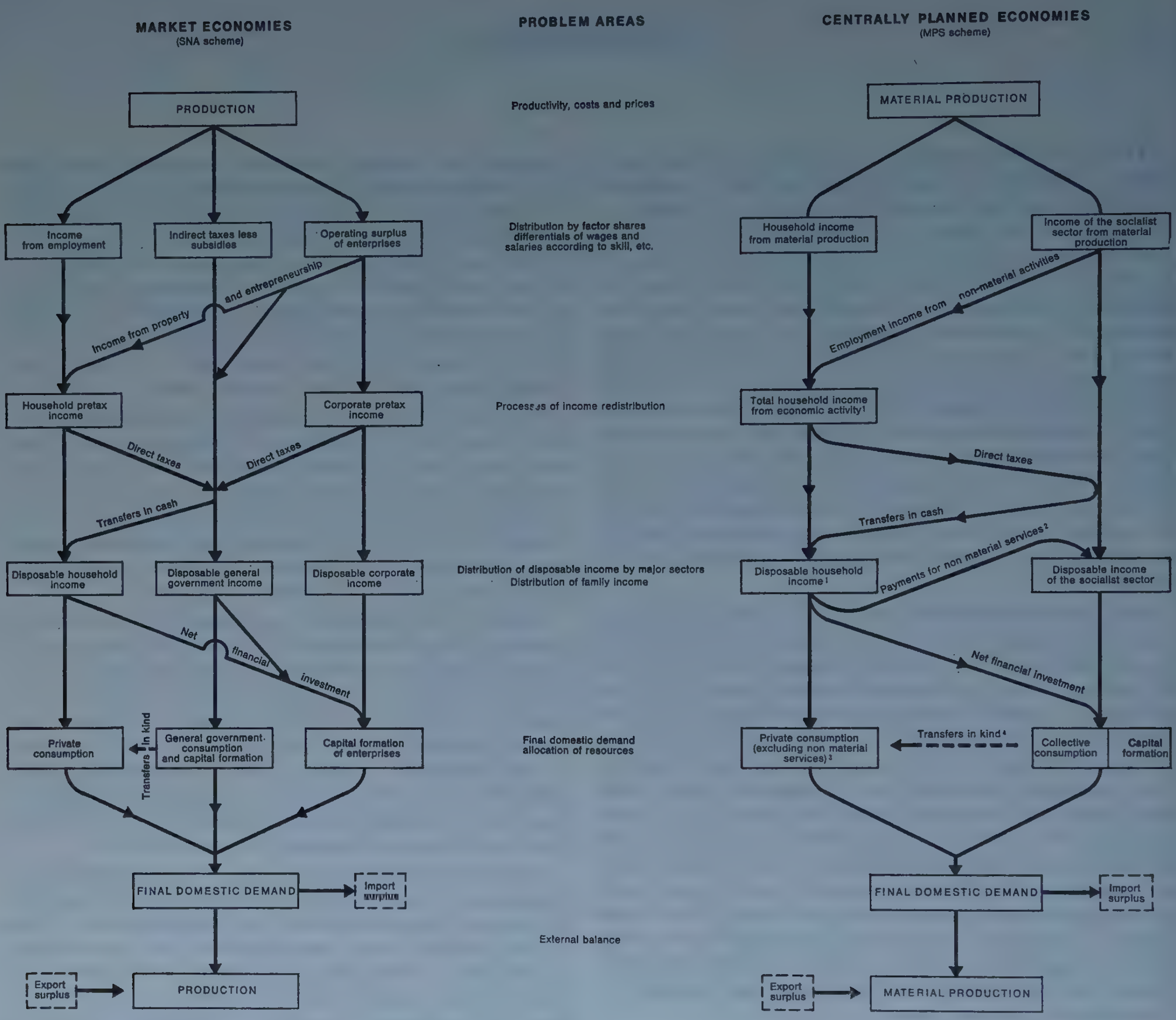
For these reasons the present study is divided into two main parts, dealing with the market economies and the centrally planned economies, respectively, and with very differing emphasis in each part on the varying aspects of the problems presented. In addition, a special chapter (Chapter 12) is devoted to Yugoslavia, where many features of the income and price system during recent years call for separate treatment.

Some of the similarities, and some of the contrasts, between the problem areas for incomes policy in the centrally planned economies and the market economies may be illustrated by the schematic presentation on page 2 of major income flows in the two types of economy. The chart, with the explanation of it below, presents a very simplified picture of macro-economic relationships based on the systems of national accounting in use. Some of the necessary qualifications will be mentioned here and others will appear in later chapters.

The total amount of primary income generated in production is distributed to individuals in compensation for labour services rendered, to the government in the form of indirect taxes (less subsidies) and to enterprises in the form of their operating surplus. In the process of redistribution, these primary incomes are transformed into the disposable incomes of what are known as institutional sectors. In the centrally planned economies, the basic division is between two sectors: the household sector and the collective sector — the latter representing both the operations of socialist enterprises and the activities of government (as tax collector and provider of capital funds and of transfers in cash and kind). In the market economies it is necessary to distinguish at least three sectors: households, corporate enterprises, and government. The instruments for redistribution are direct taxes and transfers in both types of economy; in the market economies, income from property and entrepreneurship is treated as an important redistributive flow; in the centrally planned economies, income accruing to the "non-productive" sphere is regarded, for planning and for social accounting, as a redistribution of the primary incomes generated in material production. The disposable incomes are, in turn, spent on goods and services or invested in financial claims. The sum of

INCOME GENERATION, DISTRIBUTION, AND REDISTRIBUTION

(Simplified flow patterns)


MARKET ECONOMIES
(SNA scheme)
PROBLEM AREAS
CENTRALLY PLANNED ECONOMIES
(MPS scheme)
PRODUCTION
Productivity, costs and prices
MATERIAL PRODUCTION
Income from employment
Indirect taxes less subsidies
Operating surplus of enterprises
Distribution by factor shares differentials of wages and salaries according to skill, etc.
Household income from material production
Income of the socialist sector from material production
Income from property and entrepreneurship
Employment income from non-material activities
Household pretax income
Corporate pretax income
Processes of income redistribution
Total household income from economic activity¹
Direct taxes
Direct taxes
Direct taxes
Transfers in cash
Transfers in cash
Disposable household income
Disposable general government income
Disposable corporate income
Distribution of disposable income by major sectors
Distribution of family income
Disposable household income¹
Payments for non material services²
Disposable income of the socialist sector
Net financial investment
Net financial investment
Private consumption
Transfers in kind
General government consumption and capital formation
Capital formation of enterprises
Final domestic demand allocation of resources
Private consumption (excluding non material services)³
Transfers in kind⁴
Collective consumption
Capital formation
FINAL DOMESTIC DEMAND
Import surplus
FINAL DOMESTIC DEMAND
Import surplus
External balance
Export surplus
PRODUCTION
Export surplus
MATERIAL PRODUCTION

NOTE: The income of the **Self-employed** is regarded as channelled from the operating surplus of enterprises, at the top of the chart, into household income. Capital formation by households, including Self-employers, is channelled back from household income to capital formation in the lower part of the chart.

[1] Excluding privately produced non-material services.

[2] Excluding the value of the material content.

[3] Can be taken to include private investments.

[4] Material content only.

primary incomes is equal to that of disposable incomes; for the economy as a whole, net financial investment corresponds to the export surplus of goods and services.

As indicated in the chart, certain general problem areas can be distinguished at the various stages of income generation, distribution and redistribution. Thus, issues of cost, productivity and prices arise at the production stage, while the main problems at the stages of disposable income and final demand concern the allocation of resources between the major categories of private and public consumption and capital formation. However, these two sets of macro-economic issues are strongly inter-related since production takes place in response to demand as determined by market forces and/or the decision of the authorities. Lack of consistency between major flows of goods and services and of disposable income and demand may lead to changes in costs and prices and thereby in primary incomes.

The distribution of personal incomes is one of the problem areas discussed in the study, although it cannot be shown explicitly in this simplified graphical presentation. At the production stage, the units are individuals whose remuneration is influenced by their skills and by their efforts. The distribution of employment income may, therefore, be considered as determined primarily by economic factors although institutional forces and tradition play a large part. By contrast, at the final stage, the units are households or families which pool a greater or lesser part of the disposable incomes of their members. The distribution of income between households may be said to be primarily determined by social factors such as the redistributive policy of the government (direct taxes and income transfers), the ownership of real and financial assets, and the household-forming habits of the population. However, once more, the problem areas are linked. Thus, if a given concept of "equity" is to be realized, large differentials by skill and wide differences in property ownership would require a more active government redistributive policy than small ones.

The living standards of households depend not only on their disposable income but also on the effect on prices of indirect taxes and subsidies, and on the incidence of transfers in kind, or "collective consumption" (the latter meaning a large part of government expenditure on health, education and social welfare services). The distribution of households by the size of their per capita income may, therefore, be supplemented by estimates of the redistributive effect of government price and expenditure policy. In most European countries, transfers in kind constitute an important instrument of redistribution.

Although the problem areas can be said to be the same in all countries, their significance to the policy-maker depends to a considerable extent on the economic and social system. Under the traditional system of central planning, enterprises do not possess power to take decisions which would have a significant influence on major economic aggregates. The major income flows in the centrally planned economies may, therefore, be presented by reference to two sectors only: the socialist sector (the state and the enterprises) which owns virtually all the means of production and which derives the bulk of its income from the surplus (including proceeds from indirect taxes levied mainly on consumers' goods) realized in the production and distribution of goods and services; and the household sector (the population) which derives the bulk of its income from employment and spends it almost entirely on private consumption.[1] Within this system of two sectors, only the surplus realized on consumers' goods and services is economically meaningful; the socialist sector acts in the double capacity of buyer and seller in all other transactions.

The authorities aim at direct control by setting quantitative objectives for prices, wages, production and the structure of final domestic demand. Ignoring the fact that achievement of the objectives depends on the response of labour and management to the system of economic incentives (and ignoring also non-economic factors such as the weather), only three variables may be said to fall outside the scope of the central objectives: labour supply, exports and the consumption/saving ratio in households. Errors in projecting these variables will have certain effects on other variables within the system; for example, decisions by households influence the changes in stocks of consumers' goods held by the socialist sector. But disturbances arising from discrepancies between projections and actual developments may be isolated by the authorities; economic trends in centrally planned economies cannot usually be explained by reference to chain reactions brought about by market forces. In particular, imbalances on the consumers' market may not have any impact on foreign trade and fixed capital formation.

Nevertheless, the planners attempt to avoid disturbances. At the final stage of plan construction, decisions are taken simultaneously on all variables subject to direct control. The crucial decisions concern the allocation of resources, which is the main determinant of the pattern and rate of economic growth and which is also the main consideration in determining the permissible increase in income from employment and the total increment in output. In fact, income from employment is more important as a macro-economic policy instrument than direct taxes, money transfers and prices. Direct taxes and transfers constitute comparatively small flows, and the rates of payments are not subject to frequent changes. Prices are in principle a powerful instrument, but overall stability of prices of consumers' goods and services has been a major policy objective since the middle 1950s. The maintenance of stable prices is facilitated by the system since changes in prices of exports and imports do not have any immediate effect on the domestic price level.

The control of supply, prices and of income from employment serves also more specific objectives of income distribution and of equilibrium between supply of, and demand for, consumers' goods and services in particular markets. In fact, the system of direct planning requires institutional machinery designed to enable the authorities to intervene at virtually any point in the processes of income generation, distribution and redistribution. The problems faced by the policy-makers are, therefore, much more complicated than is indicated by the chart.

In the market economies, three sectors — government, enterprises and households — must be distinguished even for the purpose of a simplified presentation of major income flows. Most enterprises are privately-owned and the redistribution of their operating surplus by reference to the intricate network of ownership relationships is a characteristic feature of market economies. As shown in Chapter 2, this feature also complicates the analysis of income flows; in particular, it is not possible to distinguish between income from employment and income from property and entrepreneurship in the case of the self-employed.

From the point of view of policy, the salient feature of the market economies is the extensive reliance on decentralized decision-making by reference to the market mechanism. The authorities are, as a rule, mainly concerned with the provision of basic economic and social services and with the overall management of the economy for the purpose of securing full employment and a satisfactory rate of growth under conditions of internal and external stability. Since wages, prices and foreign trade are mainly determined by market forces, lack of internal balance tends to bring about rising costs and prices and/or changes in imports and exports of goods and services. The latter may work in the direction of restoring internal equilibrium; however, the authorities cannot always afford to rely on automatic, but time-consuming and costly, adjustments of this type.

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[1] The chart cannot display the complex set of income flows in the centrally planned economies between enterprises and the state — flows which arise from the system of controls.

The main policy instruments available to the authorities are the amounts (in total and by purpose) of government expenditure on goods and services, taxes, subsidies and transfers and various types of financial measures. (The latter are not shown explicitly in the chart but they have an impact on the amount of revenue derived from the ownership of financial assets.) In general, the fiscal and financial instruments are mainly used to influence the rate of economic activity and the allocation of resources, but — as already indicated — they also have specific effects on the distribution of private income.

The flows of direct taxes, transfers and indirect taxes less subsidies are significant in quantitative terms and, taken together with transfers in kind, they have a considerable redistributive effect on household income. In particular, direct progressive taxation reduces inequality of income, reflecting partly inequality of wealth. In deciding on the use of these instruments, however, the authorities must also take into account their effects on saving and capital formation. The importance of these effects depends partly on institutional factors such as the customary self-financing ratios of enterprises, the organization of the capital market, tax rules governing depreciation allowances and the extent to which the government budget provides for an excess of saving over government capital formation.

It may be argued that, in a competitive market economy, policies ensuring internal and external equilibrium would also bring about a reasonable degree of stability in the price level. However, since 1953, virtually all European market economies have experienced sharp increases in prices and money incomes, in spite of the fact that the prices of imports and exports have tended to remain comparatively stable. This may be due to demand pull, i.e. the ineffectiveness of the measures to eliminate excess demand. In fact, the operational range of such policy instruments as taxes and transfers has proved to be rather narrow, while government expenditure on goods and services has shown a tendency to increase relatively fast in response to political demands and is not easily adjustable in the short run. The main burden of conjunctural policies has, therefore, often been shifted to financial instruments, which have not always proved effective. However, there is also evidence of cost push, i.e. an autonomous increase in money income and prices, especially marked in sectors not exposed to international competition, at a faster rate than the corresponding increase in productivity. Many governments have, therefore, concluded that, in conditions of full employment, there is a need for supplementing the usual equilibrating instruments by some kind of incomes policies, bearing directly on prices and wages.

Yugoslavia represents a unique case, combining features of the two major economic and social systems with innovations of its own. Up to 1952, the Yugoslav authorities applied the traditional model of central planning described above. Since that time, however, the Yugoslav system has been subject to a number of reforms which have all worked in the direction of increasing the autonomy of non-agricultural enterprises, while retaining public ownership of the means of production. The last reform in 1965 brought about a further and significant reduction in the amount of taxes paid by enterprises. Decisions on the allocation of the enterprise income between wages and capital accumulation are taken by the Workers' Councils within the framework of rules and regulations designed to preserve a given relationship between changes in wages and in productivity. Subject to this limitation, the amount of wages and salaries would, over time, reflect the profitability of the enterprise. The remuneration of employees may, therefore, be said to contain elements of income from entrepreneurship. Underlying the Yugoslav system is the hope of avoiding both any conflict of interest between workers and private owners, and any conflict between workers, managements and government authorities (although some conflicts may arise, as occasional strikes indicate).

The Yugoslav authorities have also decided to make use of the market mechanism and, consequently, to expose enterprises to internal as well as external competition. However, the country has not escaped from rising money incomes and prices in recent years. The 1965 reform introduced new price relatives accompanied by a price freeze and restrictive credit policies. In the future, credit policies are expected to play a major role in the management of the economy while price control will be increasingly limited to goods and services produced by enterprises not exposed to foreign competition.

The study tends to confirm that differences in economic and social systems have a rather significant impact on actual issues and policies of income generation, distribution and redistribution. However, policy-makers are everywhere confronted with such problem areas as the relationships between income from employment, prices, productivity and resource allocation; the transformation of individual incomes into pre-tax disposable household income; and the relative priorities to be attached to private consumption and transfers in kind. The various chapters of this study also qualify the simplified presentation given in this introduction. Procedures, methods and instruments of economic policies are not decided once and for all; governments are constantly seeking to improve the process of policy-making in the interest of efficiency and rationality. Reforms and innovations are unlikely to change the fundamental social characteristics of the systems, such as the ownership of the means of production, but the neat association of the two systems with direct and indirect (or indicative) planning respectively may well diminish in significance.

As shown in an earlier study by the secretariat, planning in western Europe is not invariably indicative in nature; the authorities cannot achieve all their economic and social objectives by exclusive reliance on market forces operating within the framework set by the use of general policy instruments.[2] This applies particularly to the management of the public sector itself and to medium- and long-term objectives established for the economy as a whole. Recent trends in technical progress and in industrial structure may increase the scope of direct planning. This would also affect incomes policies, at least in the broad sense.

Even more significant are the changes in the systems of planning and management introduced recently or contemplated by several eastern European countries.[3] In general, the reforms aim at increasing the autonomy of enterprises and at improving their ability to adjust production in response to demand. The price structures have been, or are being, revised and, in some countries, both producers' prices and retail prices of certain goods and services will be free or allowed to vary within given limits. In certain countries, the two-sector presentation used in the Chart on page 2 is ceasing to be valid. Decisions by enterprises and/or by associations of enterprises will affect wages and salaries as well as resource allocation. Central policy objectives will be achieved not only by means of direct planning but also through fiscal and financial measures taken to influence enterprise decisions. The new systems will, therefore, have a considerable impact on incomes policies but it is not yet known how they will work in practice. References to the new systems are made in the relevant chapters of this study but it has not been possible to analyse them in detail.

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For reasons already explained, the study is divided into two major parts dealing, respectively, with market economies and centrally planned economies. The contents of each part as well as of the special note on Yugoslavia are outlined below.

Incomes in western Europe[4]

The problems analysed in this part of the study are explained and summarized in Chapter 1, which reviews the major issues involved in the formulation and execution of incomes policies in market economies. The content of incomes policy is taken in a broad sense, to incorporate not only the maintenance of overall balance in the economy — the problem area which has been the centre of interest for policy-makers in recent years — but also the distribution of income between factors of production and between industries and occupations. Attention is drawn to the importance of relating incomes policies, if they are to be more widely adopted, to the need for formulating general economic and social aims.

The next three chapters are chiefly concerned with the overall changes in pay and prices during the past ten to fifteen years. The actual development of costs, prices and factor shares is described in Chapter 2. In Chapter 3 attention is focused on changes in pay, in particular on the extent to which pay changes — both through collective bargaining and through wage drift — can be statistically associated with the economic forces operating in the labour market, and on the extent to which policy may have played a part. The institutional aspects of pay bargaining in the western European countries are described in Chapter 4, together with the development of incomes policies. Attention is directed both to the influence of government on pay bargaining and prices, and to the importance of the systems of central negotiation which have been adopted in the Nordic countries and the Netherlands in contrast to the decentralized pay bargaining elsewhere.

Incomes policies cannot ignore the structure of relative wages and salaries; the pattern of relative pay must be considered by reference to the past and prospective development of the economy and society over long periods. Chapter 5 therefore examines the pay differentials between industries, and between occupations, the reasons for changes in these differentials, and the influence of policy upon them.

Problems of redistribution of incomes through taxes, subsidies and transfers are considered in Chapter 6, together with analyses of the distribution of household incomes by income size. One main purpose is to measure the different, and often contrasting, redistributive effects of income-taxes, indirect taxes (and subsidies) and social security contributions and benefits, and to assess their combined effect on households of different income levels and composition. Attention is drawn to the fact that governments have not, as a rule, regarded these various taxes and transfers as parts of an integrated redistributive policy.

Attention is directed throughout to the lack of adequate statistical information on incomes and their distribution, and to the many uncertainties still prevailing about the ways in which the income distribution process operates in market economies. More knowledge on these matters would be an important contribution to decisions about the desirability, objectives, and possible modes of operation of incomes policies.

Incomes in eastern Europe and the Soviet Union[5]

In the centrally planned economies, the general features of incomes policies have been largely determined by the strategy adopted to promote economic growth. Chapter 7 discusses, therefore, postwar trends in the income of the two major socio-economic groups — wage- and salary-earners and farmers — against the background of a brief review of the general economic policies followed during the past 15 years. The next two chapters examine in detail the major problem areas of employment income and of family income respectively. Problems of securing market equilibrium by means of income and consumption planning are considered in Chapter 10 while the last chapter provides a summary of conclusions.

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[2] See *Economic Planning in Europe (Economic Survey of Europe in 1962,* Part 2*)*, ECE, Geneva 1965, Chapter III, section 1.

[3] *Ibid.*, Chapter VI, section 1, and recent issues of the *Economic Survey of Europe*, Part 1.

[4] The study deals in detail only with the industrialized market economies of Europe. No attempt is made to discuss the problems arising in the rather different conditions of southern Europe.

[5] For lack of statistical information on income generation and distribution, it has not been possible to include Albania in the survey of eastern Europe.

Parts of Chapter 8 cover the same ground as Chapter 5 on the western side. Notwithstanding the differences in system, the reader will find that industrial structures of wages in the two parts of Europe have several aspects in common. In view of the fact that, in centrally planned economies, income from employment accounts for the major part of household income, Chapter 8 also examines the relationships between resource allocation, productivity and labour income. This section of the chapter is based on an input/output model which distinguishes four productive sectors and five groups of income-earners.

In view of the increasing interest in eastern Europe and the Soviet Union in the formation and distribution of household income, Chapter 9 is broader in scope than the corresponding sections of Chapter 6 of the western part of the study. The determinants of the distribution of the family income are analysed in detail and an account is given of the use of "income models" for planning purposes.

Chapter 10 discusses problems of achieving equilibrium between supply and demand on the consumers' market. Comparatively little attention was given to this problem area during the industrialization drive of the early 1950s. In recent years, however, the authorities have become increasingly preoccupied with income and consumption planning. Valuable information has been collected on the spending patterns of households and the recent reforms of the systems of planning and management are expected to facilitate the achievement of equilibrium in particular markets. Finally, a summary of the main findings and conclusions of the part of the study relating to the centrally planned economies is contained in Chapter 11.

Yugoslavia

The special note on Yugoslavia reviews income trends and policies within the framework of past economic growth characterized by far-reaching changes in economic structure and in institutions. The present system represents the outcome of experiments made and experience gained in the course of the last 15 years to increase economic efficiency through decentralization while retaining the fundamental feature of public ownership of the means of production. The concluding section attempts to appraise the prospects for the achievement of the dual objective of rapid economic growth and avoidance of inflationary pressures.

CHAPTER 1

PROBLEMS OF INCOMES POLICIES IN WESTERN EUROPE

Major innovations in central economic policy in western Europe have been concerned in recent years with the promotion of full employment and economic growth, with improving the efficiency of production and the allocation of resources, and with securing internal and external balance through monetary and fiscal management. Much effort has been devoted to finding new ways by which governments may, directly and indirectly, influence the operations of privately owned and controlled enterprises so that these social aims may be more effectively achieved. Apart from the considerable extensions of social security, there has not been the same concentration of political thinking and administrative experiment on improving the machinery by which the national product is distributed.

There has, indeed, been plentiful discussion of incomes policies throughout the last twenty years, and several attempts to apply them. The main emphasis, however, has been on efforts to control changes in the total of money incomes, and on incomes policy as one way of maintaining — or restoring — balance between real resources and money demand; incomes policies have been seen as one among several possible instruments for countering the forces of inflation, rather than as policies directly concerned with improving the distribution of income.

The survey made here of postwar experiments and endeavour in the field of western European incomes policies must lead to the conclusion that such policies, as so far conceived, have not proved strikingly effective instruments of economic management. The policies have had achievements to record, but limited and temporary achievements. This does not necessarily mean that incomes policies are permanently doomed to ineffectiveness in market economies. But it does mean that if incomes policies are desired, the conditions in which they can be expected to operate successfully have not always been realized.

The present study is concerned with the facts about income formation and distribution, with the ways in which income changes are effected in western Europe and with the efforts to introduce policy elements into income determination. The purpose of this opening chapter is to draw together some of the threads of a rather wide-ranging discussion by assessing in what conditions, and on what pre-suppositions about social and economic objectives, incomes policies might be developed into more effective methods of realizing such objectives. In spite of its length, the study does not embrace all possible aspects of incomes policy. Brief references are made in this chapter to some relevant matters not fully discussed elsewhere.

Some notes may be useful on the meanings attached in the western European part of the present study to a few terms which can have a variety of meanings, and on the terms used for concepts which can have several names. No suggestion of an authoritative terminology is implied.

Forms of income

Conventional rates of wages or salaries: rates (most often minimum rates) agreed by collective bargaining or prescribed by official procedures.

Earnings : actual or effective wage- or salary-earnings, in contrast with conventional rates.

Earnings gap : the difference at a point of time between the conventional rate and actual earnings.

Drift : the extent to which earnings over a period have changed more (or less) than conventional rates.

Pay : income from employment, covering both wages and salaries. (Whether employers' contributions, fringe benefits, etc., are included varies with the context and the data available and is stated where possible in notes to the tables.)

Classification of active population

Employed labour force : wage-earners, salary-earners and self-employers in work (active population *less* unemployed).

Self-employers : workers on own account, working proprietors or owners of unincorporated enterprises. (Note that the " self-employer " may also employ others.)

Industry, branch, etc. : according to the context, an " industry " or " branch " may mean any division of economic activity (including agriculture, services, etc.); or it may mean " industry " (mining; manufacturing; electricity; gas and water; and, sometimes, construction) in contrast to other divisions of economic activity.

1.1. The Meaning and Purposes of Incomes Policy

The phrase "incomes policy" has so many possible meanings that it is necessary to give some definition as to how it is understood for the purpose of the present study of western Europe. We propose to give it a comprehensive meaning, while recognizing that a narrower definition might be more appropriate for other purposes.

For the present purpose, incomes policy is taken to mean the effort to acquire a degree of direct collective control over the level and structure of the remuneration of labour and capital and over the distribution of the national income to households and enterprises. The use of "direct" control distinguishes incomes policies from other instruments of economic management such as monetary or budgetary policies, promotion of competition, foreign trade controls, growth policies and many other instruments which affect the level of national income and its distribution. The phrase "collective" rather than "government" control is used because it is taken as a reasonable assumption for western European societies that the decisions will remain, essentially, in the private sector and that governments, even if they hold certain compulsory powers, must influence primary incomes mainly by guidance and persuasion of managements, workers and their representative organizations; in practice, in particular for wages and salaries, it is the policies adopted by these collective organizations which must be the instruments of incomes policy.[1] The definition is further broadened to include the effects of government action to redistribute primary incomes through taxation, both direct and indirect, and through the provision of free or subsidized goods and services ("collective consumption") and transfers in money. This, also, is a form of incomes policy, of a more traditional kind. It has an important impact on the allocation of resources between private and public expenditure, on the level of total demand, and on the distribution of household income. It is thus closely related to the problems with which contemporary incomes policies are concerned; but it also raises many independent issues. It is discussed in section 1.4 of the present chapter.

Incomes policies, taking this broad definition, may have a number of purposes in market economies. These may be divided between short-term and long-term, and between aggregative and distributional, purposes.

Most interest recently has centred on incomes policies as a method of stabilization — as a way of lessening inflationary pressures, especially when such pressures appear to cause loss of competitive power and consequent balance-of-payments problems. For this purpose, the main function of the policy is simply to contain the increase of money incomes in *total*. It may not matter if Peter's income is excessive, so long as Paul is correspondingly underpaid — and so long as Paul remains amenable. Such policies may be regarded either as emergency measures appropriate only for short periods of excessive demand, or as requiring more or less permanent machinery to prevent incomes from rising too fast. In fact, one of the major lessons to be learnt from the experience of incomes policies in operation is that any such simple and aggregative concepts are almost bound to be unrealistic. There is no western European country where the rate of increase of total money incomes can be regarded as an "instrumental variable" — as one of the levers of economic control which the government can directly manipulate (as a government can directly manipulate the rate of interest or the rates of taxation). The aggregate of incomes can be directly influenced only by influencing the rewards of specific groups or the prices of specific goods and services. Apart from emergency devices, such as temporary "wage stops" or "price stops" — and even these need a fairly complicated legal and administrative apparatus as well as general agreement that they should be observed — an incomes policy aimed at stabilization must concern itself with income distribution. It will be seen how impossible it has been, in postwar experience, to evade the distributional aspect of even the simplest kind of incomes policy.

Indeed in one important respect a specific distributional policy has been practised in almost every western European country; almost everywhere, farm incomes are more or less closely determined by government agricultural policy, exercised through price regulations, or import controls, or direct subsidies, of which the central purpose is to maintain a certain relationship between incomes in agriculture and those in the rest of the economy. For the most part, however, as will be shown, the long-term distributional aspects of incomes policies have not been formulated except in very general terms — for example, the improvement of the relative position of "low-paid workers". However, an incomes policy may be conceived of which the main and explicit purpose is to influence income distribution rather than the aggregate level of incomes: to influence relative pay in different branches of the economy and different occupations and the division of income between labour and capital. To carry through such a policy is essentially a long-term process.

The theoretical practicability of influencing pay or prices

To discuss incomes policy at all implies one obvious assumption, namely that governments, unions and managements are able, in practice, directly to affect the course and pattern of pay or prices. This may be denied. It may be maintained that pay changes, at least in the short run, are simply responses to changes in general economic circumstances, meaning, mainly, changes in the supply of labour and in the demand for it. If this were so, there would be no place for incomes policy as such: the course of incomes could be affected only by influencing the demand for labour, which depends on the demand for goods and services, through fiscal or monetary policy; or by influencing the supply of labour, for example by immigration policy or by promoting mobility of labour.

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[1] The definition is thus intended to cover methods of co-ordinated pay bargaining even if the government is not directly concerned. For the countries to which this definition of incomes policy applies, see Chapter 3, page 1.

This proposition is discussed at length in Chapter 3, with the help of various statistical analyses for the past 10-15 years designed to show how far, in actual experience, short-term pay movements can be traced to the operation of independent economic variables. It is shown that year-to-year movements in pay, both in conventional rates and earnings, have been, in most countries, to some extent associated with the level of unemployment and with changes in consumer prices. The force of this association differs from country to country, and the statistical relationships are not stable. The conclusion drawn is that in practice economic forces, and the institutions associated with pay bargaining, are both important in determining pay changes. This can be taken to mean either that the institutional practices determine the movement of pay, but within certain limits set by general economic conditions; or that the institutional structure sets certain limits on the operation of short-term economic forces. In either case, it must be recognized that changes in the policies and attitudes of the relevant institutions do affect the movements and structure of pay. The understanding of developments in institutional policies and attitudes is therefore essential to understanding why pay changes come about and what openings exist for influencing them.

It has not been possible in this study to carry out a similar analysis of the variables determining short-term movements in prices or profits. But a few such analyses have been made for various countries, both for price forecasting and for analysing the determining factors in the price behaviour of enterprises. The question of major interest is the extent to which prices respond to demand influences as well as to cost changes.

It is the common experience [2] that profit margins (profits per unit of output) in fact fluctuate much more violently than labour costs per unit of output — the share of profits in total income falling when total demand and output fall, or rise least rapidly. This cyclical variation in the share of profits might be taken as a reflection of the influence of demand on prices. But — depending on the magnitude of the fluctuations — it may also be taken as, simply, a reflection of the effect on average costs of a lower rate of use of capacity and of labour. A cyclical downturn, even if it means only a slower rate of growth of output, implies larger overhead costs per unit; and "overhead" costs mean not only capital costs but also a considerable proportion of labour costs; when scarcity of labour is normal, it becomes increasingly uncommon — even if technically possible — to dismiss workers in precise accordance with fluctuations in demand which are expected to be reversed within a few months. Thus the lagged reaction of employment to output variations is a major factor in the cyclical variations of productivity and labour costs.[3]

Patterns of price changes in relation to changing demand obviously vary greatly from country to country and from industry to industry. One pattern of typical price policy — or price behaviour — has been suggested which appears to conform quite satisfactorily with the movement of average industrial prices and costs in at least one country — the United Kingdom. This is that enterprises determine prices by calculating costs, taking into account (*a*) the changes in pay per worker-hour in the immediate past, any change in indirect taxes (or subsidies), and the costs of material and fuel input (with a time-lag broadly related to the level of stocks); (*b*) the effect of the long-term trend in productivity (or, which in practice has much the same result, assuming operations at a normal rate of use of capacity); (*c*) a "normal" profit margin or rate of return on capital.[4] If this hypothetical explanation were correct, it would follow that deviations in productivity from the long-term trend — and such cyclical deviations in productivity are closely associated with corresponding deviations in total output — would be fully reflected in the profit margin, that is, in deviations of actual from "normal" or planned profit margins. The aggregate price and cost data for the United Kingdom during the 1950s and early 1960s accord closely with this hypothesis. The implication is that prices are not sensitive to cyclical changes in demand, so that the load of such changes in demand, and consequently in output, is carried by the profit margin. A similar analysis of cyclical movements in prices and costs in the United States suggested a greater sensitivity of prices to variations in demand than in the United Kingdom, and, therefore, a still greater variation in profit margins.[5]

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[2] See Chapter 2, page 21, which describes the course of prices and of cost components, but does not attempt a causal explanation of them.

[3] F. R. P. Brechling and P. O'Brien, "Short-run employment functions in manufacturing industries: an international comparison", to be published in *The Review of Economics and Statistics.*

[4] See R. R. Neild, "Pricing and employment in the trade cycle", Cambridge University Press, 1963 (where the hypothesis is applied to manufacturers' prices); and W. A. H. Godley and D. A. Rowe, "Retail and Consumer Prices 1955-1963" in *National Institute Economic Review*, November 1964 (in which the same type of explanation is shown to be appropriate for explaining a large part of the variations in retail prices).

[5] R. R. Neild, *op. cit.*, page 48. For a review of *American* empirical investigations of pricing behaviour, see O. Eckstein, "A Theory of the Wage-price Process in Modern Industry", *Review of Economic Studies*, October 1964. In Eckstein's view, the empirical studies quoted are broadly consistent with the "target-return" pricing hypothesis (p. 282), showing a rather weak short-term influence of demand on industrial prices ("target-return" pricing is described as "calling for a price sufficient to earn the company its target rate of return on capital when it operates at its standard rate of operation" (p. 269)). The price equation in "The Brookings Quarterly Econometric Model of the United States" (Ed. J. S. Duesenberry and others, Chicago 1965) is based on a similar hypothesis — that prices are set by a mark-up or profit rate on costs assuming a normal rate of operation. Attempts were made, but not very successfully, to correlate the variations in actual profit rates with indicators of demand (rate of capacity utilization and stock output ratios). A more recent quarterly model constructed in the Office of Business Economics (*Survey of Current Business*, May 1966) explains changes in the GNP price deflator mainly by changes in unit labour costs somewhat modified by changes in the ratio of output to capacity.

The price equations in the Central Planning Bureau's short-term model for the *Netherlands* introduce, besides cost changes, variables reflecting international competition: the share of imports in the total market (used as an indicator of total demand) appears to be positively associated with profit margins in the consumer price index; the rate of capacity utilization, represented by unemployment, is positively associated with export prices (when unemployment rises and capacity utilization falls, profit margins on exports fall). See, for example, P. J. Verdoorn and J. J. Post, in "Econometric Analysis for National Economic Planning", Ed. P. Hart and others, 1964 (Proceedings of Colston Research Society).

More detailed research into price and cost patterns would show how far typical patterns of price policy can be derived for different countries and for different branches of industry. In the present state of very imperfect knowledge, however, it is not unreasonable to work on the assumption that prices — like pay levels — are largely influenced by certain patterns of management policy. These patterns are not the only possible ones and are, in principle, susceptible to influence.

In the broad sense adopted here, however, incomes policy is concerned with much more than the reasons for short-term variations in the rates at which pay or prices change. It is concerned also with longer-term changes in the distribution of income between factors of production — between income from work and income from capital or entrepreneurship. It is also concerned with differences in pay relatives, between industries or between occupations. No empirical test is known which would show how far these long-term changes in income distribution are in fact determined by the economic functions which the theorists put forward to explain changes in factor shares (for example, elasticity of substitution between factors, or the technological bias towards capital-saving or labour-saving innovations). It is, in the nature of things, effectively impossible by historical analysis to separate the long-term influence of such economic functions from the deliberate influence brought to bear by institutions and policies. The analysis, especially in Chapter 2, of trends over a decade in the pattern of factor costs and factor shares shows a good deal of stability, but also some significant changes. Thus, in some countries, the labour share of income — taking into account the inadequacy and inherent difficulties of the data — appears to show a rising trend, but not in others. The interpretation must be open.

The analysis of changes in pay differentials between industries, in Chapter 5, shows a remarkable stability in the pattern in most countries, although there are some striking differences in the pattern as between countries. The stability in occupational patterns is rather less marked, but the data are much less adequate. The influence of "policy" is difficult to trace — although it is clearly seen in one respect: the big differences between countries in the ratio of women's to men's pay. Otherwise, the most obvious conclusion is the effectiveness of the strong institutional pressures to maintain traditional pay differentials, in spite of changing economic and social circumstances. Similarly, the possible interpretation of managerial price policy put forward above implies also that managements typically aim at a certain level of profit, without too much regard to short-term fluctuations in demand. It is true that this planned rate of profit will not be achieved in the short run, except when demand conditions happen to conform to those assumed in setting prices; but the planned rates of profit may be achieved over an average of good and bad times. If so, the question arises to what extent these planned long-term rates of profit are given by the structural conditions of the economy, and to what extent they depend upon recognized conventions. The question cannot be answered with precision. Within certain limits, however, it seems reasonable in the light of recent thinking to suppose that the overall rate of profit, in the longer term as in the short, contains, like the pay structure, an element which can be regarded as depending on contemporary attitudes and implicitly agreed conventions.[6]

Thus in no important aspect have the facts proved changes in the level or distribution of incomes — whether we are concerned with pay differentials or with distribution between factors — to be so precisely or firmly determined by "market forces" or structural conditions, either in the long term or the short, that any attempt to influence the income distribution would be futile. Existing institutions and attitudes, and the force of inertia, may indeed create more powerful obstacles to effective policy than the operation of supply and demand. The conditions in which institutions and attitudes might be changed is the main issue in this discussion.

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[6] See, for example, E. H. Phelps Brown in "The long-term movement of real wages" in *The Theory of Wage Determination*, Ed. J. T. Dunlop, 1957. The author points to periodical, and sustained, "displacements" in the wage-profit ratio, reflecting changes in the rate of profits regarded by entrepreneurs as "normal" and reasonable, which cannot be accounted for by structural factors or changes in market environment.

1.2. DEFINING THE OBJECTIVES OF INCOMES POLICY

We may go on to consider what kind of problems arise when an attempt is made to formulate, in more concrete terms, the objectives of an incomes policy. These are the questions that are bound to emerge, sooner or later, once a government is committed to an incomes policy. Some of them may not be raised explicitly and to some an explicit answer may be evaded. But the questions, even if not publicly stated or answered, underlie the difficulties of securing agreement on the execution of policy. This section is concerned only with the formulation of objectives. The conditions in which such objectives might be realized is the subject of section 1.3.

We may begin with the problem of setting "norms" or "guide-lines" for the most elementary kind of incomes policy — one concerned only with changes in total money incomes and aimed at preserving an overall balance in the economy between factor incomes and resources.

The concept of the "room" for increases in pay in a given year has been applied in all countries where any kind of incomes policy exists. Such "norms" may be defined by the government after consultation with employers' and workers' representatives (as in the United Kingdom), or agreed as a basis for central pay negotiations (in such bodies as the Social and Economic Council in the Netherlands).

For the most part, the problem of defining a norm for pay increases has been conceived in simple terms. The aim has been, for various reasons, to stabilize so far as possible the general level of prices. The proposition that prices will be stable so long as aggregate factor incomes increase no faster than the total volume of output has passed out of economics into public relations. It has been further simplified into the proposition that, to avoid a general price increase, average pay per employed worker should not increase faster than average productivity per employed worker — a simplification which is not necessarily legitimate for reasons to be given. Thus "norms" or criteria for the rate of increase in pay have been set up, based on the trend of output or productivity in the past or on some forecast for the future. Such a principle of rough justice may be enough, if all that is hoped is to influence events in the desired direction during a short period. But if a more solid basis for policy, both realistic and likely to carry conviction, is intended, the formulation of the norms needs more refinement.

Even if incomes policy is thought of in the most aggregative terms, three questions must be answered to determine the quantitative norms or criteria.

(a) *Incomes policy and the price level*

The first question concerns the change intended in the *general level of prices*. Because of the preoccupation with curbing price increases, it has been common to base the norms on the assumption of no general price increase at all. There is an obvious strategic reason for this: to base policy on an expected price increase of X per cent (however low X is put) is to run a very high risk that prices will increase by at least X. At the same time, the assumption of no future price increases, in present conditions in most of western Europe, is unrealistic for several reasons.

First, an economy is a system of lagged reactions. For example, if consumer prices have been rising in the immediate past, that in itself will create pay claims, simply to preserve real income, from those who have not had a recent pay increase. If pay bargaining is decentralized, and not simultaneous, there will always be a large proportion of workers in this position; their claims will often be impossible to resist, even if on average their actual real earnings have been increasing because of drift. Such pay increases will themselves accentuate the rise in prices. The most that can be hoped is that prices will stabilize gradually as the lagged effects of price increases fade out. For many other reasons, the lags in the economic system make it impracticable to cut off at one stroke a phase of price increases.

Secondly, it has been emphasized repeatedly, in all discussions of incomes policy, that overall price stability implies that some prices must fall. If only because of varying rates of increase in productivity, overall price stability implies that unit labour costs are rising in some enterprises and sectors and falling in others. If prices in the latter sectors do not fall, the effectiveness of the incomes policy will be reflected in a rise in their relative profit margins. Rising relative profit margins in sectors where productivity is increasing fastest may be desirable: that depends, partly, on how big the differential becomes. But there is no doubt that it increases the difficulties of holding the line in pay increases in those sectors, without doing much to restrain pay increases where relative profit margins are falling. The proposition that some prices should fall is not completely "romantic" (as it is described by one writer);[7] even in phases of quite rapid overall price increase, examples of falling prices for specific goods or services can be found. But to stimulate price declines is even more difficult than to restrain increases. It may be done, but it will take a longer time to get accepted on a sufficient scale.

Thirdly, there is the influence of foreign trade. No country with a substantial import proportion can expect to insulate itself from inflationary forces in the economies of its trading partners. The effect of inflation abroad is bound to be felt not only directly on prices, but also on pay movements. Nevertheless (as Chapter 2 shows), imports have on the whole had a significant moderating effect on the rise in prices in most of western Europe. This applies not only to the imports of primary products, but also to the growing imports of competing manufactures.

Thus a norm based on price stability is not, in many circumstances, likely to be observed in practice. For these reasons, some recent quantitative formulations of incomes policy have been based on the inevitability of some continuing price rise in the immediate future.[8]

However, the *desirability* of complete price stability may also be questioned. It is impossible to consider here the various arguments about what direction and rate of general price changes is most conducive to economic growth and welfare. These arguments concern the efficacy of rising prices in stimulating economic progress, by reducing the burden of debt and the risks of investment. It can be recognized that the rates of price increase in recent years in most of western Europe have been, for many reasons, uncomfortably rapid, without agreeing that the most satisfactory alternative is a stationary overall price level. What is perhaps more important, from the point of view of growth and welfare, is that the general price tendency should be more or less predictable and under control. The injustices which result from a falling value of money arise largely because the decline in the value of money has been unforeseen and irregular. It is not entirely theoretical to suggest that there are ways in which the injustices could be remedied. It is true that, in many countries, governments have adopted a very negative attitude towards proposals for any kind of procedure for the regular and automatic adjustment of certain kinds of money claims to a rise in prices. The main reason is that to establish such procedures appears to recognize the inevitability of continuing inflation, and may thus render continuing inflation more probable. This may be true. But the fact is that it is impossible for governments to resist for long the need to adjust many kinds of money claims to inflation after the event (for example, most kinds of social security arrangements), although such adjustments do accentuate the inflationary pressures. It is a matter for calculation how much would be added to these pressures by the extension of such adjustments to other kinds of claims (for example, interest on certain forms of government-encouraged savings, or pensions permanently fixed in monetary terms), or by provision being made for automatic instead of discretionary and delayed adjustments.

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[7] A. M. Ross, *Monthly Labor Review*, June 1966, page 624 (United States Department of Labor).

[8] For example, the French Fifth Plan, the 1965 Report of the West German Committee of Experts, and the 1966 Report of the Danish "Three Wise Men" (see Chapter 4).

In several countries — the United Kingdom being the most striking example — the major incentive for curbing price increases is less their inherent disadvantage than the association between internal inflationary pressures and loss of competitive power in world trade. From this point of view, the national objective of a country in continuing balance-of-payments difficulties would appear to be not necessarily stability in the price level, but a lesser rise of prices than that in competing countries. It is important, however, to be clear how far an improvement in competitiveness can be expected from moderating the rise in internal prices. Fairly close associations are found between changes in relative *export* prices and changes in shares of export markets.[9] But it is by no means certain that changes in the general level of internal prices are closely associated with a corresponding change in export prices. The point is examined in Chapter 2 (page 4), where it is shown that in some countries, but not in others, it has in fact proved possible to a great extent to insulate export prices from the rise in internal prices (even when the manufacturing sector is considered separately). Various reasons can be given for this. The major enterprises concerned with exports may have kept export prices low at the expense of the home market. The significance of the indicators of "export prices" is in doubt: the relative stability of the export price indices (generally "unit value" indices, currently weighted) may be the result of a commodity pattern shifting towards goods where costs have risen least. It is to be expected that international competition would help to promote the greatest productivity gains in internationally traded goods. Alternatively it may have been possible to keep export prices down by accepting reductions in profit margins which were abnormally high to begin with (this explanation implying that such differences in trend between export and domestic prices will not continue indefinitely). So long as there is uncertainty on these points, it is impossible to be sure that success in achieving a smaller reduction in internal prices generally than competing countries will bring the expected benefits of an improved balance of payments.

(b) *Factor shares and the allocation of resources*

The second question which must be answered by those who set the norm concerns the *distribution of income between factors of production* — essentially between labour rewards and profits. The simple objectives — pay per head increasing with productivity per head (i.e. stable unit labour costs) while prices remain stable — imply that the shares of labour and capital in income remain unchanged. This may be perfectly acceptable. But it is essentially a provisional and short-term solution, and can be valid for the longer term only if there is reason to believe that the existing distribution represents a satisfactory, and lasting, equilibrium and is consistent with economic and social progress.

The problem of whether to aim at a shift in the distribution of incomes between factors must be associated with the third question for the designers of an incomes policy: the relation between factor distribution of income on the one hand, and the *allocation of resources*, essentially between private consumption, public expenditure, and private investment, on the other. This relationship depends, of course, not only on the distribution of factor incomes but also on the effects of taxes and government expenditure. To achieve consistency is indeed a major task in the construction of incomes policies in the centrally planned economies, where — to oversimplify — one aim of policy is to ensure that disposable household income is adjusted to the predictable supply of consumer goods and services.

The problem in the west, again, is generally seen in fairly simple terms. A shift in factor distribution in favour of labour is, other things being equal, expected to reduce savings, since the marginal savings ratio for labour income is less than the marginal savings ratio for enterprise profits; a fall in savings is expected to reduce domestic investment and ultimately to have a damaging effect on international competitiveness. Unless it is intended to shift the allocation of resources away from investment — which has not often been an explicit objective in the postwar history of western European economies — or to allow a rise in the price level, this shift in income distribution would be regarded as undesirable.

While this simple statement has quite often represented a basic and perfectly valid aim of policy in western European postwar conditions, it is subject to many qualifications. There is a certain tendency to identify the financing of private investment with the level of enterprise profits, implying an identification of investment with self-financing possibilities. This may be valid, in practice, in certain circumstances; declines in profit ratios during the last four or five years have given rise in several countries to fears that the level of private investment will be prejudiced.[10] For instance, one of the elements of the "*planification en valeurs*", a novel feature of the French Fifth Plan, is a statement of the desirability of an increase in the self-financing ratio, which seems to imply an increase in the share of profits in national income.

In fact, of course, the funds available for self-financing do not depend simply on total profits; they depend also on dividend policy and on tax rates (including, particularly, the depreciation rules for tax purposes which can greatly affect the ratio of taxes to gross profits). Moreover, the supply of external sources of funds for private investment does not depend simply upon the level of savings by the household sector. It depends also upon the institutions of the capital market; household savings can become an important source of funds for private investment not only through direct personal investment in corporate securities but also through such channels as life insurance and superannuation funds and through banks. Where, for example, the financial institutions are restricted in their investments through law or custom, enterprises are likely to be obliged to rely heavily on self-financing. The extent to which government funds, as well as household savings, are channelled into private investment also varies widely from country to country. In France, notably, Government lending institutions have become an important source of funds for private industry. An increase in taxes, although it may reduce the flow of funds for self-financing, will not necessarily reduce the total supply of savings. That depends on the shape of budgetary policy as a whole.

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[9] See, for example, H. Junz and R. R. Rhomberg, "Prices and export performance of industrial countries 1953-1963", International Monetary Fund, *Staff Papers*, July 1965.

[10] This question is reviewed in more detail in the study "The financing of private productive investment", in the *Economic Survey of Europe in 1965*, Part 1, Chapter II, pages 84-96.

There has been much discussion, too, of the question of how much self-financing is most conducive to economic efficiency. Self-financing may, for example, promote more concentration in industry and for that reason may or may not be regarded as desirable.[11]

It has been suggested above that the equilibrium rate of profit, or the "supply price of capital" (considered as a rate of return on capital or as a share of factor income), is not necessarily to be regarded as determined independently by economic functions. To some extent, at least, it may be altered in response to institutional or other changes; it is, as has been pointed out, affected by (and in turn affects) the facilities for obtaining external finance. The rate of return considered appropriate, at which entrepreneurs will aim in their price policies, may well vary from time to time and between countries.

Thus a change in the rate of return on capital, and in the distribution of income between labour and capital, is not necessarily to be excluded from the aims of an incomes policy. What is essential — if a given private investment ratio and a given growth rate are also regarded as aims of policy — is, first, that steps should be taken to ensure a corresponding change in the flow of savings from households or the public sector; and, secondly, that the relevant institutions, and particularly the institutions of the capital market, should also be adapted to a different pattern of the flow of funds from savings into investment.

The question then arises as to how a desired shift in distribution of income between labour and capital can be brought about. What has been said so far suggests only that management attitudes towards the rate of return on capital considered normal, and aimed at, might be changed. "Techniques of persuasion" might help to bring about such changes. In indirect ways, the regulation of monopolies and restrictions on price-fixing agreements may exercise some influence. But more direct methods would almost certainly be necessary. Enforcement of a "profits policy" through the representative management organizations is not really practicable — although such organizations can play a role by influencing attitudes and conventions.

Direct control of enterprise profits is not generally regarded as a promising solution (as distinct from the taxing of profits, or the provision of subsidies). Although enterprises may aim at certain profit levels, it remains true that the profits actually realized, in the individual case, depend on a great many outside factors as well as on management intentions.

Regulation of dividends is more often proposed, and has been instituted from time to time in some countries. Its appeal lies in the fact that dividends, since they accrue largely to individuals, appear most closely analogous to wages and salaries and thus to demand similar treatment in an incomes policy. The same argument applies to the much more frequently practised regulation of rents, especially house rents; moreover, the importance of rents in household budgets, and the incidence of widespread rent changes on pay claims, make it difficult to imagine an effective pay policy without some regulation of rents.

However, dividends and rents make up only a fraction of total income from capital, and changes in dividends may well be offset by opposite changes in retained profits and so in the value of assets. At the same time, rates of dividend are influenced by the long-term rate of interest, which is already a policy instrument of the central authorities. In a broad sense, long-term interest rate policy may be regarded as an aspect of incomes policy.

It seems improbable that the regulation of interest rates, dividends and rents is by itself likely to be an effective way of producing a desired distribution of income between labour and capital remuneration. It must be concluded that an effective approach to influencing this distribution can be made only through regulation of prices. In practice, price regulation has been the only instrument extensively used (apart from rent controls) to influence incomes other than pay.[12] Some of the issues raised by this conclusion are discussed below (page 11) together with other problems of devising machinery for executing an incomes policy.

(c) *Incomes policy and pay distribution*

The third question to be considered, in formulating the objectives of an incomes policy, is the distribution of changes in pay between industries, degrees of skill or training, and occupations. In practice, incomes policies in operation have tended to avoid the adoption of explicit and detailed criteria for pay distribution. The simplest solution has been found to be one which more or less preserves the existing pay structure, apart from certain important but non-controversial exceptions such as the more favourable treatment of exceptionally low-paid workers. The efforts to achieve even this simple aim have in fact been largely frustrated by wage drift. Thus, whether or not any conscious incomes policy is in effect, the pay structures have tended to maintain a remarkable stability in spite of the substantial economic and social changes which might have been expected to affect these patterns. The stability of these pay relatives, between industries or between occupations, is brought out by the discussion of pay structures which is the subject of Chapter 5. This stability, together with observations of the process of pay bargaining, confirms the common impression that, particularly in conditions of full employment, the major determinant of pay structure is the effort of each group — generally though not always successfully — to maintain a relative position established at some time in the past. In default of more complex criteria, the principle of equity is interpreted to mean the preservation of existing inequalities, or — and this is where the criterion ceases to be a simple one — the restoration of inequalities holding at some time in the past.[13] Whether this appeal to history creates a useful criterion for the pay structure can be doubted, and in practice the ambiguity of the criterion can become a major cause of conflict. But the facts suggest that the general shape of the pay structure has become almost an exogenous variable, determined by history and social institutions and itself responsible in part for changes in demand and relative prices, rather than a system of responses to structural or market forces.

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[11] In some countries, proposals have been put forward, especially by trade unions, for replacing some part of self-financing by channelling a part of profits into investment through a central investment fund. These proposals (discussed in section 1.5 of this chapter) derive from the desire for a wider ownership of capital and for greater social control over investment.

[12] It is not suggested that price regulation is in practice widely used with the major purpose of establishing a particular distribution of income between pay and profits. Its major purpose is often to exercise an influence on pay claims.

The reconsideration and remoulding of these conventions — which in any case differ considerably from country to country — may well be considered a major long-term function of a comprehensive incomes policy. There is every reason to think that the attempt to preserve the existing structure intact creates not only a barrier to such long-term transformations as may be desired in the social structure, but is also a potent factor in the inflationary process.

The macro-economic view of inflation, and of the part played in inflation by pay movements, conceals this distributional aspect of the problem. On the macro-economic view, excess monetary demand for goods and services (*a*) stimulates a general rise in prices which in turn provokes general claims for extra pay, which the rise in prices, and expectations of continuing growth, make it possible to meet; and (*b*) when translated into demand for labour, directly provokes general claims for higher pay, which are met out of a consequent rise in prices. There may be a preference for emphasizing one of these explanations rather than the other but both formulations stress the *generalized* nature of the process. What may be lost from sight is the fact that the upward movement of pay may well spring from tensions, or a sense of inequity, among *particular* groups whose relative pay is low by some past standard. Once these claims are met, other groups add their own to preserve the current pay relativities. Even in conditions of more or less balanced overall demand, the reaction will be a general rise in pay and prices; a state of excess demand is not required to start off such a process (although it is not likely to spread in conditions of general depression). In this sense, it is the stresses caused by a particular pattern of relative incomes, and not only by excess demand in general, which bring about the escalation of pay and prices; this is a problem which an incomes policy, in its more usual aggregative form, may be unable to solve.

To define explicitly the aims which a distributional incomes policy might pursue presents the greatest difficulty. Two general principles might be recognized — the principle of equity and the principle of efficiency. There are many concepts of "equity" in income distribution; that to which trade union movements in western Europe have traditionally held is the principle of equal pay for equal work (or "the rate for the job", or "solidarity", which basically express the same objective): essentially, workers doing the same kind of job should receive the same pay irrespective of the financial or other circumstances of the industry or firm in which they are engaged. It must be recognized that the vagueness of this principle renders it difficult to apply in practice. By contrast, the principle of "efficiency" requires a link between productivity and pay. In its simplest form, this may be achieved by individual piece rates. But current discussion involves rather the linking of pay with the productivity of the enterprise, or even of the branch of industry (for example, through "productivity bargains" under which pay increases are offered in return for improvements in working methods). It is clear that "equity" and "efficiency" come into conflict, especially because the principle of "efficiency" is likely to lead to a greater inequality of earnings reflecting simply the great differences in productivity between enterprises.

The principle of equal pay for equal work has not prevented unions, in certain circumstances, from putting greater pressure on prosperous enterprises and prosperous industries; this is one way of levering up the whole pay structure, even if it involves a sacrifice, which may or may not be short-lived, of the principle. Diversity of pay does not, of course, arise only from union pressures; it occurs, too, because individual employers bid up pay to attract enough workers, or the best workers, or to keep their existing staffs. Thus one of the major features of postwar pay development — especially marked during the 1960s, widespread in nearly all western European countries and associated with full employment — is the prevalence of effective pay levels well in excess of the conventional rates set by formal collective bargaining, rising faster than these rates, and creating a widely dispersed pattern of effective earnings. This process of "wage drift" is analysed in Chapter 3 (page 18).

For nearly a century, the main efforts of trade unions have been directed to establishing a more or less uniform standard rate for each category of workers and thus to prevent competition through wage-cutting. There are still, in most countries, areas of the economy where this aim has not yet been fully achieved. But over most of the field, in most countries, the policy problem for trade unions is now, under the new conditions of full employment, not so much to achieve this uniform standard rate as to define their attitude towards the diversity of effective pay levels. If the function of unions is to be restricted to bargaining about a uniform standard rate which is effectively a minimum, leaving actual earnings to be determined in other ways, no great problem arises. Many people would say that this is the right answer: let collective bargaining determine a minimum and exercise an influence on the rates of change of pay; but within this framework let the actual pay level in each enterprise be determined freely.

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[13] "The strongest appeal is the appeal to history: and the appeal to history is, in a sense, an appeal to fairness." K. G. J. C. Knowles in *The British Economy in the Nineteen-fifties* (ed. Worswick and Ady), Oxford 1962, page 518.

If, however, unions seek to make collective bargaining once again concerned with effective pay levels, then they have the task of formulating criteria appropriate to contemporary conditions — a task which may be defined, no doubt in too simple and abstract a way, as resolving the conflict between "equity" and "efficiency" as principles for pay distribution. It may, of course, be asserted that "equity" and "efficiency" should not conflict: that an income distribution which best promotes the efficiency and growth of the economy, and the fastest improvement in average living standards, should be recognized as the most equitable. In practice, it is clear, this philosophy is not the one most widely accepted by those directly concerned. The conflict exists, and is likely to continue.

The difficulties which these issues have caused, and the ways in which efforts are being made to overcome them, are illustrated from the experiences of several countries in later chapters.

Employers face the same problems. For the most part, employers have long accepted the undesirability — and, for that matter, the impossibility in current conditions — of competition through wage-cutting. Acceptance of the standard rate is a protection against low-wage competition and has long been welcomed by most employers. But opinions are not unanimous about the desirability of high-wage competition. It will be shown that managements are sometimes anxious to preserve the freedom of effective wage determination — above certain minima — which they have in effect secured. Others would prefer to see a greater uniformity, which might lessen this element of uncertainty and instability not only in production costs but also, and more important, in human relations within the enterprise.

The problems of pay distribution have so far been discussed in terms of the policy issues for unions and managements. They are, however, problems of profound importance to society as a whole, and thus for government. It is often enough suggested that government should confine itself to general management of the economic "climate", leaving the pattern of pay distribution, and of prices and profits, to those directly concerned. Against this, it can be argued that there are no islands in a modern economy; every significant pay adjustment for a group of workers has its immediate repercussions on other groups; it is an illusion that any group bargain between employers and workers concerns that group alone. The facts displayed in this study show how the pay structure tends to move forward as a whole in response to advances made at a particular point. Nevertheless, the task of government in these matters is a delicate one.

The basic problem, however, is that of working out principles and criteria which might guide the changes required in the pay structure and the first function for government is, perhaps, to stimulate consideration of issues which it has so far been possible to ignore. This must mean, in practice, that the representative organizations of management and workers should be encouraged to formulate explicit and coherent policies out of which a consensus might be reached. The prospects of any such consensus vary, of course, from country to country. In some, any realist must recognize, the chances of agreement are at present poor.

One line of solution put forward is the general use of standard methods of "job evaluation", which may be regarded as a rational and objective method (and, perhaps, although this may be denied by some, as one way of giving precision to the general principle of equal pay for equal work). For a time, standard systems of job evaluation were used in the Netherlands to test the pay structures submitted for official approval by enterprises and branches of industry. In other western European countries (for example, Austria and Sweden), fairly elaborate national job classifications have been established to serve as guides for determining pay structures in collective bargaining. (The use of these systems is described in Chapter 5, page 21.) In eastern Europe (see Chapter 8, page 7), such systems have played a major part in the establishment of patterns of pay relatives. The defects of such standard systems are well-known. Thus, they rest on what are inevitably subjective assessments of the relative weight to be attached to particular characteristics of each job. Moreover, it is difficult for those who assess these weights to depart from the valuations imposed by the existing pay structure. For example, it may not be difficult to find general agreement that differentials should be awarded for exercising "responsibility" or for acquiring certain technical qualifications: the problem, however, is to find agreement on just how much such differentials should be in terms of cash earnings a month. The conflict between "equity" and "efficiency", as abstract principles of pay distribution, may not be solved in this way, since the conflict remains implicit in any system of job assessment. Nevertheless, the introduction, by mutual agreement of those concerned, of standard job classifications and of standard systems of assessing jobs does appear to offer an opening not only for introducing uniformity into pay structures but also for rationalizing and improving them and for escaping from excessive reliance on ancient custom.

1.3. Conditions for an Effective Incomes Policy

It is clear that the effective operation of even an unambitious form of incomes policy reaches far into actions and decisions normally left to private organizations in a market economy. Such a policy can hardly be imposed simply by a government decision. Like any system of "indicative" economic planning, it requires the assent and willing co-operation not necessarily of all, but of a great majority, of those concerned. In a market economy, the practical and political problems of securing this consent, and of making it effective, are far more difficult than the intellectual problems of formulating the aims and parameters of an ideal policy.

It is suggested that the conditions which must exist, or which must be brought about, for effective operation of an incomes policy can be grouped under five heads: (*a*) the assent of a majority of those concerned; (*b*) machinery for effectively enforcing the carrying out of the stated objectives as regards both pay and other incomes; (*c*) an appropriate policy for the regulation of total domestic demand; (*d*) a flow of public information sufficient to apply the incomes policy and to demonstrate the way in which the policy is working; and (*e*) willingness to accept certain "social costs" inherent in incomes policy.

(a) *The need for assent*

There is little new to be said about this initial condition for operation of an incomes policy. There are countries in which the process of pay bargaining is so closely involved with social or political conflict that in present circumstances no agreed formulation of objectives is likely to be possible. Willingness to accept a common framework for pay and price decisions depends on two things: first, on agreement that such a common framework is in the interest of society — which may be argued either on social grounds or on grounds of economic advantage; and second, on willingness to renounce the relative advantages that do in fact accrue to individual groups — if only temporarily — from the competitive struggle. To persuade people that a rise in the pay of one group will rapidly raise the whole structure of money incomes and prices, so that in the end society will be no better off, misses the point, and is, in any case, generally accepted. As was pointed out above, the practical problems of incomes policy arise in its application to the specific group, not in its application to the aggregate of incomes.

It has often been pointed out that co-ordination of pay agreements — at least at the stage of collective bargaining — has had its successes only in relatively small countries (the Nordic countries, the Netherlands, Austria) where the sense of social cohesion is strong, and where a limited number of leaders of the organizations of workers and employers can arrange matters by mutual consent. It may also be pointed out that the co-ordination of pay bargaining has so far operated only in countries where labour parties, with close links with the trade union movements, participate in government (thus bringing in the United Kingdom which may be regarded as an exception to the previous rule). However, historical experience is hardly wide enough to allow such generalizations to be accepted with any certainty.

It is clear that the process of securing consent to the principles of incomes policy is one that primarily concerns — besides the government — the trade unions and the employers' organizations. Without a willing and strong initiative from these organizations, no progress is likely.

(b) *Machinery for effective execution of policy*

Pay policy

Willingness on the part of unions and employers' organizations to accept the co-ordination of pay settlements according to an agreed framework is not in itself enough. What is required is *ability* on the part of these organizations to control the pay structure. The study provides ample evidence that formal collective bargaining, throughout western Europe, is losing much of its influence over the actual level and structure of pay because of the growing importance of pay determination at the level of the individual enterprise, subject to only a restricted amount of union control.

It seems evident that a much tighter organization of pay bargaining at the enterprise level is a necessary condition for the execution of incomes policy. The various ways in which, in different countries, unions and employers' organizations are coping with this problem — whether or not in pursuit of a co-ordinated pay policy — are described in Chapter 4, and some indication is given of the conflicts of interests involved. Where the problem of wage drift is most acute — as in the Scandinavian countries and the United Kingdom — the strengthening of control must inevitably take a long time to achieve.

At the level of formal collective bargaining, the question arises how far the system of *central pay negotiation* can be regarded as a useful method of organization. During the past twenty years, pay bargaining has been largely centralized in the Nordic countries and in the Netherlands, in the sense that generally (although not always, in some of these countries) the main framework for pay changes has been laid down by a single negotiation between the employers' and trade union central federations covering the majority of organized workers. In Austria, a certain amount of co-ordination has been effected in a rather different way (a description will be found in Chapter 4). "Co-ordination" does not necessarily imply direct government participation; it has done so in the Netherlands, but not elsewhere. Nor has central negotiation normally prescribed precise pay changes for every branch. The advantage is rather that a central negotiation for a wide range of industry is bound to take into account general economic considerations — and particularly the implications for the balance of payments; whereas in a negotiation covering only a single branch of industry, however large, it is always possible for the negotiators to preserve the illusion that the result of their negotiation affects only the workers and enterprises within the branch concerned. The central negotiation provides a focus where general economic considerations can be brought to bear on the pay bargain. An effort is made (in Chapter 3) to see, so far as the data allow, whether countries where there has been some central co-ordination of pay bargaining show any different results from countries where bargaining is wholly decentralized among the branches of the economy. The tentative conclusion is that, at least during certain periods, these countries have in fact been somewhat less subject to cost inflation notwithstanding substantial wage drift.

The central negotiation of an overall pay increase is not necessarily the only way by which a co-ordinated framework for pay bargaining may be built. For example, the machinery used in Austria (where the approval of the Joint Wages and Prices Commission is required before individual unions begin to bargain) and the machinery recently established in the United Kingdom (under which all pay claims are submitted in advance for advice to the Trades Union Congress) might provide possible alternatives. It is also to be expected that *simultaneity* of bargaining in individual branches should help to reduce escalation of pay claims, which seems to be encouraged by continuous bargaining throughout the year. But, however the machinery is designed, there must be a central body with authority and responsibility which is in a position to inject the national interest into the bargaining over individual pay claims.

These two requirements — the control of pay settlements at the local level and the central co-ordination of formal collective bargaining — admittedly impose a formidable burden on trade union organizations. The same problems arise on the employers' side. Yet it is hardly possible to envisage the execution of any serious and lasting incomes policy until at least a beginning is made on meeting these requirements.[14]

A central issue is the function which the government should exercise. It hardly seems desirable that a government should entrust the formulation, interpretation and application of a co-ordinated pay policy wholly to voluntary organizations of labour and management — especially when the checks and balances provided by internal and external competition are of doubtful efficacy. On the other hand, trade unions and employers' organizations cannot become simply instruments for the execution of government decisions without losing their functions and authority as free associations (this is one reason for the erosion of the system for pay policy in the Netherlands). But between these extremes, there lies a wide variety of ways in which government influence may be exerted. The situation envisaged, it must be remembered, is one in which the majority of unions and employers' organizations are endeavouring to carry out an agreed policy. Even in these conditions, however, unco-operative minorities are bound to appear from time to time, and to be in a position to secure agreements seriously out of line with the general framework. The arguments for restraint in pay claims, for example, may have a much stronger impact in sectors of industry exposed to international competition than elsewhere. Conflicts of interest, which cannot be entirely avoided in an imperfect world, can endanger both willingness and ability to execute a common policy.

One possibility is that the government should have power to refer particular bargains to objective inquiry (with or without power to postpone the conclusion of an agreement until the results of the inquiry are known). A hopeful experiment on these lines is the British National Board for Prices and Incomes established in 1965. The Board's inquiries and reports have dealt not only with the justification for particular pay or price changes but also with possible improvements in the efficiency, organization, and pay and price structures of the industries concerned (see Chapter 4, page 16).

It is tempting to suggest that the machinery for conciliation and arbitration, which has long existed in most countries for the settlement of specific industrial disputes, should be used for the application of the criteria — once they have been established — of incomes policy. These bodies may indeed be able to bring to bear wider considerations of national interest than has so far been usual.[15] But it is probably important, although opinions differ on the point, that the necessary function of mediating or arbitrating in specific disputes should be kept separate from that of attempting to enforce consistency with official policy.

In addition, it may well be considered necessary that governments should have an ultimate power not only of delay but also of veto over particular pay settlements. Although (except perhaps for short periods of emergency) the principle would at present be resisted in many countries, both by employers and unions, its application would not necessarily be unwelcome to a majority endeavouring to preserve an orderly system of pay determination.

Price policy

The discussion so far has concentrated chiefly on wages and salaries. Yet any incomes policy concerned exclusively with influencing pay lies wide open to the objection that control of pay in isolation — if it has any effect at all — is likely to mean a shift in the distribution of income unfavourable to wage- and salary-earners. The point is commonly made that whatever intentions lie behind an incomes policy, especially if its purpose is chiefly anti-inflationary, the policy is much more likely to be effective in restraining pay increases than increases in other incomes. This is a central issue in attitudes towards incomes policies.

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[14] One rather common feature of the machinery for collective bargaining in western Europe is the single bargain for the metal-using or engineering industries — which often account for a third or a half of the whole manufacturing labour force. This practice arises no doubt from the common elements in the occupational structure of the industries concerned. Yet, the unit is clearly much too large for complete uniformity, thus giving rise to extensive drift in these trades, although too small to provide the advantages of a centrally co-ordinated negotiation. In several countries, efforts are being made to break up this unwieldy element in the bargaining machinery.

[15] Thus in Australia and New Zealand, the central official arbitration courts, which enjoy certain powers of compulsion, have developed into machinery for determining wage changes taking into account a wide range of factors. But in western Europe it is usual for both parties to insist that factors extraneous to a particular case should not be introduced. See H. A. Turner and H. Zoeteweij, "Prices, wages and incomes policies", International Labour Office, 1966.

It has been suggested above that the effective way of influencing primary incomes other than pay is by exercising control, or influence, over the course of prices.

The arguments about where the incidence of incomes policy should fall revolve around two questions: one is concerned with the "responsibility" for inflation, and the other with administrative problems. As regards "responsibility", it is argued on the one side that pay changes are the most important element in cost changes; the division of income between labour and profits is fairly stable over time; hence if the rate of pay increases can be reduced, there will be a corresponding effect on prices and the distribution of income will be unchanged. This implies, of course, a somewhat extreme view of prices as cost-determined in the short run.

On the other side, it is argued that the main determinant of pay changes is price changes; if the rise in prices could be restrained, restraint of pay increases would follow. There is, indeed, much empirical support (summarized in Chapter 3) for the view that changes in consumer prices exercise an important influence on pay changes; but they are far from the only influence, and the correspondence between pay and price changes is not always strong.

No attempt will be made here to resolve this argument, except to suggest that " it is the interaction of prices, profits and wages which maintains the inflationary process".[16] It is thus generally recognized that incomes policy, to be effective as well as acceptable, must be concerned in one way or another with all primary incomes. This means in practice that incomes policy must be concerned with prices, and through prices influence profits, rents, and self-employment income, including of course farm incomes.

The argument then turns to the administrative practicability of price control. Some suggest that prices and pay should be treated in a precisely analogous way. If, for example, the central trade union organization undertakes to "test" pay proposals, then the central employers' organization should similarly "test" proposals to change prices.[17] Others point out that there is no real analogy between pay and prices. Pay changes are determined, it is said, by a manageable number of employers' associations and trade unions. Within a reasonable range, and assuming goodwill, the policies of these organizations can be directly influenced. In most cases, such pay changes occur only at long intervals — rarely more than once a year. No great administrative apparatus is required. Even the imposition of statutory control would not prove too overwhelming an administrative task. This situation is contrasted with prices, which can be changed from day to day by any of many thousand individual enterprises.

The contrast is greatly overdrawn. In reality, in most western European countries, effective individual earnings — as distinct from formally agreed pay rates — are infinitely various and may change at very frequent intervals. On the other hand, the prices of a very wide range of goods and services are fairly standardized and price lists remain unchanged for long periods. The suggestion that a commodity exchange represents the typical market for goods and services is as unreal as the suggestion that the effective income of a typical worker is determined by a top-level negotiation between a quasi-monopolistic trade union and a quasi-monopsonistic employers' association.

The contrast between pay determination and price determination, however, remains. The formal collective bargain over pay does exercise a very substantial influence over effective earnings of most workers, in spite of drift (as is shown in Chapter 3). And although a relatively small number of large firms may effectively control the prices of a quite large proportion of goods and services, in most western European countries the number of significant price fixers is too large for control through a few organizations or a small administrative machine. Moreover, the difficulties of any form of external control are increased by the variety and continuous small changes of quality and specifications for many goods.

Thus neither pay nor prices could be *completely* supervised by simple voluntary arrangements with a small number of organizations or enterprises. More important, pay decisions are probably more often than not the outcome of a confrontation between those directly concerned — whether at the formal bargaining level or in the workshop. This is probably so "more often than not", in spite of the fact that the pay schedule in an enterprise may very often be the result of a unilateral decision by the management, representing no direct bargaining (just how often the pay scale can be said to be "bargained" and how often "unilateral" differs from country to country and would be difficult to determine). On the other hand, it is clear that the prices of only a relatively small proportion of goods and services result from a direct bargain between buyer and seller.

This is not to say, of course, that the greater element of bargaining in pay decisions necessarily means that pay decisions are a less significant factor in inflation than price decisions. As already pointed out, in favourable market conditions workers and employers are bargaining not about the distribution of a fixed size of cake but about the distribution of a cake whose size is, in money terms, to some extent, elastic. For these reasons, among others, the control, or supervision, or co-ordination of pay and prices has not, in practice, generally been organized with perfect symmetry.[18] It must be recognized that the problems of securing some effective control over prices have not been resolved. It is clear that the processes of pay and price determination are sufficiently different to render a precisely symmetrical machinery difficult to operate with equal effectiveness.

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[16] O. Eckstein, "A Theory of the Wage-price Process in Modern Industry", *Review of Economic Studies*, October 1964, page 283.

[17] See particularly the negotiations in the United Kingdom in 1965 over the establishment of incomes policy machinery (Chapter 4, page 17).

[18] The machinery for prices, described in Chapter 4, sometimes consists of advance notification of price changes directly to a

(c) *The use of demand policies*

Incomes policies are seen as a way of avoiding, or at least reducing, the social costs imposed by other ways of counteracting inflationary pressures. These other ways consist essentially in using demand policy — mainly budgetary and monetary instruments — to check the growth of money incomes and prices, and generally involve in practice a check to the growth of output, real incomes and employment.

It is abundantly clear from experience that incomes policies alone are unlikely to be effective in conditions of extreme pressure of demand. There is a point at which trade union officers are completely unable to resist the pressure from the membership to take full advantage of favourable market conditions, and a point at which managements — confident of being able to pass on extra labour costs to the consumer — cannot be prevented from making competing offers for labour and from raising prices. A complete legal prohibition on pay and price increases may be more or less effective for a short period in such circumstances, but any attempt to operate a policy of voluntary restraint imposes too heavy a load on the authority of the best-intentioned and most responsible representative organizations. The function of the trade union officer is normally understood to be that of securing pay increases for his members, and of management to expand output, meet demand and increase profits. The task of incomes policy is to introduce into the performance of these functions a greater sense of the national interest and a long-term rather than a short-term view of the interests of the workers or enterprise concerned. The task of demand policy may be described as that of making it less easy to seize the short-term advantage.

A certain tendency may be observed for governments, reluctant to curb a boom by restricting demand, to appeal, as a last resort, for pay and price restraint — shifting responsibility on to unions and managements. This is not likely to be effective in conditions of high pressure. At the same time, unions and managements may tend to underestimate the extent to which they are in fact able, by concerted action, to moderate their response to market conditions; in their turn they may wish to shift the whole responsibility on to the government's demand policy.

Two conclusions emerge. First, an incomes policy must be regarded as one arm only of a policy of short-term economic management; if an incomes policy is to be adopted, it must be harmonized with the use of budgetary and monetary instruments, its modest purpose being to allow the economy to operate at a somewhat higher level of output and employment than would otherwise be necessary to maintain or restore internal and external balance. The second conclusion is that the useful time to establish the machinery for incomes policy is not when the demand pressures are strongest; even though an incomes policy may then seem most urgently needed, and even though formal agreement to co-operate may then be more easily secured, the obstacles to the actual execution of a voluntary incomes policy are at their greatest. The result is likely to be disillusion and disappointment, and reluctance to perceive the usefulness of incomes policy in less strained circumstances.

Accepting these conclusions, the reader may ask whether the practical difficulties of establishing an incomes policy, with the struggle against inflation as its main purpose, are so great, and its usefulness so limited, that the effort might well be renounced in favour of refining the alternative instruments of demand management. To this, two answers may be made. First, the use of budgetary or monetary policy to check the increase in money incomes and prices operates by keeping output below capacity and by increasing unemployment. Equally important, the check to output has disruptive effects on business expectations and so on investment and prospects for future growth. If any way can be found of reducing these costs, so much the better. Second, the instruments of demand policy are themselves very far from perfect. It is true that these imperfections result in part from the crudeness of the instruments so far used, from lack of foresight in their application, from lack of knowledge of the speed and effectiveness with which they operate, and from the political obstacles to using them in the most effective way. But although better ways of using these instruments can be imagined, and should obviously be pursued, it would not be realistic to suppose that they will be so perfected in the foreseeable future that the support of incomes policy — if an incomes policy can be expected to be effective at all as an anti-inflationary weapon — can be regarded as unwelcome. In fact, both arms of short-term economic management are likely to remain imperfect. The difference is that while demand policy is everywhere necessary but (when it restricts output and employment) carries a heavy cost, incomes policy is less painful, but may not at present be practicable in all countries. Thus the decision to attempt the execution of an incomes policy must in practice depend not upon theoretical comparison of the respective merits of incomes policy as against demand policy, but upon the political background and institutional conditions which determine the probability that an incomes policy will have an appreciable effect.

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government department, allowing the Minister to intervene by persuasion, and sometimes by compulsion, as required (comprehensive in the Netherlands, selective in Norway). In only one country, Austria, is there anything approaching "symmetrical" machinery (the Austrian Joint Wage and Price Commission), although reserve powers are held by government to impose maximum prices, but not maximum pay. In two countries (Belgium and France) there has been active government intervention in prices, but it has been impossible to establish machinery for pay co-ordination. In no country has machinery for direct government intervention in pay questions been attempted without some powers of government intervention in price questions (although in some countries, notably Sweden, an incomes policy exists — in our broad sense of centralized pay bargaining — while prices are entirely "free").

(d) *The need for information*

At several points in this study, reference is made to the absence of statistical information required for analysis of the actual development of income formation and distribution. This is not merely an obstacle to the kind of comparative international analysis of income distributions which is attempted here. It is a very real obstacle, in each country, for understanding the problems, for formulating policy conclusions, and for executing policy with public acceptance.

It may be useful to illustrate here some of the major and fairly common gaps in statistical information (not all, of course, apply to every country).[19]

(i) Great importance is attached to the distribution of income between the factors of production, labour and capital. The definition and measurement of factor shares in fact presents great difficulty (for reasons given in more detail in Chapter 2, page 12). One difficulty is the deficiency of information, in many countries, about profits, and the related problem of estimating depreciation, or capital consumption. Partly it is due to the even more intractable problem of how to treat the incomes of self-employers — incomes which inextricably mix remuneration for work with return on capital; if the changing (generally declining) importance of this category of incomes is ignored, quite misleading impressions can be given of changes in factor shares. Perhaps one major contribution would be to establish statistics of wages and salaries, of profits, and of capital consumption in the *corporate sector* of the economy. If statistics of factor shares for the corporate sector alone could be established, that would represent considerable progress.

(ii) In the body of information available on wages and salaries, three gaps stand out. First there has been, for historical reasons, a concentration of statistical effort on wages, as distinct from salaries (partly perhaps because of greater uniformity in wages, partly because of the greater numbers involved — reasons which are now disappearing). One result has been to concentrate the analysis of productivity and labour costs on wage-earners alone — with misleading results because of the relative growth of salary-earners. Secondly, the bulk of the statistical information generally relates to "industry", while many branches of services are ignored. Again, historical reasons can be found, but their justification is diminishing. Thirdly, recent developments in wage and salary statistics have tended to concentrate on the analysis of wages and salaries by *industry* rather than by *occupation*. This is important and highly desirable for the analysis of costs. But from the point of view of income distribution and incomes policy, at least equal interest attaches to statistics of pay by occupation. Statistics of occupational pay were formerly far more frequent, and represent indeed the main source for historical analysis of wages.[20]

(iii) Existing statistics are rarely presented in the form of *dispersions* of earnings among individuals or enterprises. Such dispersions are needed for coping with two central problems of incomes policy: (*a*) the analysis of drift and the earnings gap: it is not known how much variability in earnings exists between enterprises; and (*b*) the analysis of "low" earnings: efforts to improve the relative position of the lower-paid are a feature of all incomes policies but it is generally impossible from existing data to identify — by any criteria — how many low-paid workers there are or in what industries they are to be found.

(iv) The analysis of *redistribution* of income is seriously deficient because of the lack of information from which to build up an integrated account of the incidence of taxes and social benefits on households of different income size and composition. There is a serious need for a more intensive exploitation from this point of view of household budget surveys.

(v) One of the main issues in discussion of income distribution is the fact that gains from capital appreciation are inevitably excluded; yet — at least in times of rising prices — there are reasons for thinking that capital gains influence not only standards of living of property owners but also resource allocation. It is difficult to suggest how adequate statistics of capital gains could be obtained, but approximate methods could be developed which would indicate possible orders of magnitude.

(vi) The analysis of the factors in price changes (especially in Chapter 2) is based largely on acceptance of what are often very rough estimates of "net output prices". These are derived from comparisons of national accounting data at constant prices with those at current prices. It is doubtful whether the estimates for some countries are strong enough to support the analysis based upon them.

For the formulation and execution of policy, however, more information is needed than an expanded flow of statistics. There are many points on which far more research is required to establish the economic processes involved in income formation and distribution. A particular need is for more research into the process of price determination.

(e) *The social costs and benefits of incomes policy*

From what has been said, it is clear that the decision to operate an incomes policy implies the acceptance of certain losses of freedom in the settlement of pay and prices. For some individual groups, it implies a sacrifice of potential short-term gains. It involves, as has been suggested, the effective exercise of authority by the central organizations of trade unions and employers over their constituent organizations, and the acceptance of decisions by these organizations over settlements at the enterprise level. It also means that the greater influence of representative organizations — both those covering ordinary workers and the professional organizations — must be accepted by those outside these organizations to an even greater extent than occurs at present. It has been suggested above that some powers of supervision by government over both pay and prices are probably necessary. From the point of view of consumers, there is an obvious risk, in spite of government supervision, of new or strengthened opportunities for the exercise of monopoly power.

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[19] Most of these suggestions relate to matters covered by the review of international recommendations for national accounts and statistics of income distribution now in progress in the Statistical Commission of the United Nations and the Conference of European Statisticians.

[20] The difficulties are not underestimated, especially because it is no longer sufficient to have statistics of conventional rates; data about actual earnings need to be collected. However, the British Ministry of Labour has now found it possible to collect periodically, from employers, statistics of actual earnings by occupational groups within each industry.

What an incomes policy offers is the possibility of two gains: a way of balancing total incomes with resources, which avoids the waste, the disturbances and the loss of potential growth in living standards associated with alternative ways of restraining money demand in conditions of full employment; and, in the longer term, the opportunity for introducing more order, stability and rationality into income distribution, and of applying socially acceptable standards to it.

The contrast in "freedom" between the existing situation and that under a fully operating incomes policy need not be overdrawn. For the majority of workers, the pay level is more or less determined already and the possibilities of individual bargaining are greatly restricted. For managements, the freedom to determine prices is in theory unlimited, but is in practice restricted and largely influenced not only by external market forces but also by prevailing conventions. It may be held that the important question is not how much effective freedom of action would be sacrificed, but whether the criteria of income distribution determined by social decision would be preferable to the mixture of market forces, custom and group pressures by which income distribution is now governed.

This choice is, in the broadest sense, a choice of political aims and priorities.

1.4. The Redistribution of Income Through Taxes and Social Benefits

It may be suggested that if a different distribution of income is socially desirable, the most effective way of achieving it is through the tax system, the payment of transfer incomes and the free, or subsidized, provision of certain goods and services by the state. The extent to which redistribution already occurs through these channels is reviewed in Chapter 6.

Broadly speaking, it appears that in most of western Europe it is through state expenditure rather than through taxes that redistribution takes place. The tax system must be looked at as a whole — taking into account the incidence on households at different income levels not only of direct taxes on income but also of indirect taxes on consumers' expenditure and of social security contributions. Although income-taxes are normally progressive, their income-equalizing effect is very heavily modified by indirect taxes and by social security contributions. The incidence of indirect taxes varies according to the structure of the tax system and the pattern of household expenditure; a uniform rate of tax on all commodities (for example, a uniform tax rate on turnover or added values) tends to bear equally on all income groups and is therefore neutral in its distributive effect; the incidence of a tax system which is concentrated on certain commodities (e.g. the British system, with its heavy concentration on taxes on drink and tobacco) depends upon the income elasticity for these commodities. Such limited investigations as have been made suggest that in most countries the proportion of tax to consumers' expenditure (even after allowing for price subsidies on food and rent) remains stable, or falls, as income increases. Social security contributions are either fixed amounts per person, or, more often, increase with income but not proportionately. On balance, indirect taxes and social security contributions, which together generally make up well over half the total of tax receipts, tend to represent a diminishing proportion of income as income rises, and thus accentuate the inequality of original pre-tax income. This effect is strong enough in most countries to counteract the equalizing effect of income-taxes for the majority of households — for all except the poorest groups (who pay little if any income-tax, and who include pensioners and others not contributing to social security) and the richest groups (subject to steep marginal rates of income-tax).

On the other hand, social security benefits and provision for collective consumption of their nature bring about a substantial redistribution, most marked where flat-rate systems, rather than wage-related benefits, apply. Thus when the incidence of the whole system of taxes and benefits is considered, the net result is generally to add substantially to the original income of the poorest groups — of whom a large proportion are "non-active", with negligible amounts of original income — and to subtract substantially from the original income of the richest. But, again, the general pattern of income distribution, by size of income, for the great majority of households, is only slightly affected by government action.

These conclusions, however, are concerned only with 'vertical' redistribution between households of different levels of total income. In a 'horizontal' sense, fiscal redistribution is more effective as an equalizing force. Most systems of taxes and benefits operate, though in varying degrees, to the advantage of families with a large number of children, so that inequality in income per capita is substantially reduced, even though inequality in income per family is not. Social security and government services also serve to redistribute income over time: children's allowances and educational and health services provide help for the young family, and pensions, health services and other benefits assist the old, while periods of unemployment, sickness and disability are normally provided for. These are forms of 'horizontal' redistribution of income — or of redistribution of income over the life-cycle of the individual family — which apply in every country to some extent, without necessarily influencing the general distribution of income between social classes.

When viewed as a whole, therefore, it cannot be said that the western European systems of taxes and social benefits represent any fundamental redistribution of original incomes. In part, this is because the systems have grown up gradually, as the result of a series of decisions based upon immediate exigencies. The various structures of income-tax, indirect taxes, social security and collective consumption have been developed to a great extent independently, and have rarely been regarded by governments as separate parts of a coherent system of redistribution.

It would, presumably, be possible to reconstruct these separate parts of the tax/benefit system, by taking into account their interrelationships, in such a way as to achieve some of the long-term objectives at which an incomes policy might aim. Redistribution in these ways has, in fact, the advantage that it can be related to the circumstances of the family, whereas an incomes policy operated through the machinery of pay negotiation can affect only the incomes of individuals. On the other hand, the extent of practicable discrimination within a tax system — for example, between earnings in different occupations or industries — is severely limited. Moreover, it is difficult to imagine a tax/benefit system achieving any very substantial redistribution in conflict with the forces creating the structure of primary incomes; it is rarely impossible for the structure of primary incomes to be readjusted so as to compensate for the subsequent tax incidence. These readjustments may, indeed, become a significant inflationary force.

The function of the tax/benefit system may, perhaps, best be conceived as that of introducing an element of distribution of income between households "according to need" which is beyond the range of even the most acceptable distribution of primary incomes between individuals. Regarded in this light, the systems in existence in western Europe are capable of considerable improvement, based on fuller analysis of what is, in fact, the combined incidence on households in different circumstances of the various parts of the multiple systems of taxes and benefits.

It has also been suggested that tax policy could be more effectively used for short-term stabilization by associating it more systematically with short-term incomes policy. It is increasingly recognized that tax adjustments should be more widely employed as an anti-inflationary instrument — essentially by taxing away excess private purchasing power. A less orthodox proposal is that tax adjustments should be systematically used as an explicit "sanction" to reinforce incomes policy. For example, certain "norms" would be announced in advance for the acceptable increases over the year to come in wages and salaries, corporate profits, dividends, rents or other incomes. If there were, in the event, larger increases, these excess increases would be removed by additional taxes. Thus not only the total increase in disposable incomes, but also the relative increase in particular kinds of disposable income, would be controlled.[21] The difference from the normal use of tax adjustments to counteract inflationary pressures is simply the announcement in advance, in the hope of influencing pay bargaining and the dividend distribution or price policies of enterprises. The objection to applying such a proposal to the *total* of different kinds of income is that it could accentuate the efforts — already vigorous enough — of each individual group, or enterprise, to move a step ahead of the others and thus to receive a relative advantage. Moreover, the penalty is necessarily paid a long time after the "illicit" benefit is gained.

In theory, the principle could, of course, be extended to *individual* increases in pre-tax income — every increase in an individual's or enterprise's pre-tax income over a given amount being removed in whole or part by taxation.[22] The result would be similar to that of a compulsory wage or price stop. Such a scheme could reduce the inducement to claim, or to give, increases in pay in excess of the norm, or for an enterprise to operate a price or production policy likely to result in an excess increase in profits. Whether the anti-inflationary benefits would outweigh the cost in terms of incentives is open to doubt.

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[21] Thus *The Economist* (28 September 1963) proposed that the personal income-tax on dividends might be adjusted each year in such a way that dividends, after tax, increased no faster than hourly wages and salaries. Rents might be treated similarly. A more elaborate suggestion is made by P. G. Elkan, "Proposte relative ad una possibile politica salariale", *Economia Internazionale*, May 1965. Under his scheme, employers would be entitled to deduct from all individual wage and salary payments an amount equal to the proportion by which *aggregate* wages and salaries increased in excess of a given "norm", centrally agreed. (Presumably the same kind of result would be achieved, though after a longer delay, through an adjustable tax on wages and salaries based on the same principles.) Thus the *pattern* of pay arrived at by decentralized decisions would be preserved while the rise in the total would be restricted.

[22] This principle has occasionally been adopted. For example, the excess profits levy in the United Kingdom (in 1952-1953) was charged on any company whose profits exceeded a standard amount.

1.5. OTHER APPROACHES TO INCOMES POLICY

Notes follow on two questions which are closely related to the objectives of incomes policy. These raise important issues dealt with extensively in other literature, and are discussed only briefly here. They are:

(*a*) active manpower policy, and

(*b*) capital-sharing proposals and incomes policy.

(a) *Active manpower policies*

Much attention has recently been given to the encouragement of "active manpower policies". These consist of promoting industrial training and re-training, employment services, the spreading of information about labour demand, vocational guidance, financial support for moving house, rehabilitation of the handicapped, financial compensation for workers made redundant, assistance in the absorption of immigrants and similar measures. The general intention is to ease the movement of workers to jobs where their capacities can best be used, and so to reduce the obstacles to flexible adaptation of employment and output to changing economic circumstances and to technical progress, and to alleviate the difficulties which this adaptation brings to the workers concerned. The importance of putting much more drive behind such policies was emphasized first in Sweden in the late 1950s. It has been taken up in many other countries and is being actively encouraged by the International Labour Office and the OECD.[23]

The general purpose of such policies is that of helping forward structural changes in the economy, and might be regarded as a greater 'liberalization' of the labour market. They have a certain significance in relation to incomes policies, and to other policies for countering inflation. So far as such policies can succeed in widening the range of job opportunities for the individual, and for making fuller use of existing manpower resources, they may be expected to reduce inflationary pressures which arise from temporary or local scarcities. Thus an active manpower policy may well help to allow the economy to be run at a higher level of employment and capacity utilization, without intensifying pressures of excess demand.

The encouragement of mobility of manpower also enters into the discussion of incomes policy in a different way. It has been shown that income differentials between branches of industry do not appear, on any great scale, as a major determinant of the movements of workers between industries.[24] Hence a policy for income differentials designed mainly to attract workers to where they are most needed would not only be difficult to execute in view of the forces making for a long-term stability in relative pay structures; it might also — unless the differentials were very large indeed and subject to frequent change — prove ineffective. It seems probable that the smooth redistribution of labour required for an efficient economy will be achieved more easily by faster development of the various components of "active manpower policies" than by any incomes policy designed for this special purpose.

(b) "*Capital-sharing*" *and incomes policy* [25]

In several countries — France, Italy, western Germany, the Netherlands — proposals have recently been put forward, principally by trade union groups, suggesting that, in one way or another, workers as such should normally share in enterprise profits and capital. The schemes differ from the long-established, but never very widely adopted, systems of profit-sharing practised by individual firms in three respects: in the emphasis on capital ownership rather than on shares in profits (although capital and income aspects can hardly be divorced); in the comprehensive basis for the new schemes (in that all workers in a branch of industry, or in the economy as a whole, should participate in total profits — thus breaking the link between the profits of any one firm and the incomes of its employees); and, consequently, in the need for the schemes to be established by legislation or collective bargaining, instead of resting on the decision of an individual enterprise.

It is only in western Germany that any scheme on these lines has actually come into effect. An Act of 1965 provides that trade unions should have the right to negotiate, on an industry-wide basis, for establishing workers' investment schemes: employers' payments into such schemes, up to a certain limit, would be tax-free.[26] Once such a scheme is agreed, it would, under the general law for collective negotiations, become compulsory for all firms in the industry. Workers are unable to draw on their entitlement for five years. The form in which the savings are to be invested is left to the participants to decide. The Act met some opposition from the German employers' federation but was supported by many who were disturbed by the social consequences of highly unequal wealth distribution.

Advantage was at once taken of the new Act to introduce a scheme in the construction industry within the framework of a new basic collective agreement.[27] Although each worker can choose his investment outlet, the union has established a special bank (with the assistance of the general trade union bank) to attract as much as possible of the funds into investment channels subject to union influence.

The Act of 1965 represents a mild form of a much more radical system proposed in the 1950s by the *Deutscher Gewerkschaftsbund*. These proposals envisaged that as much as half of gross profits would be paid into investment funds controlled by the trade unions.

In the Netherlands, proposals were first put forward in 1953, and were revived in 1964 in a joint recommendation by the three trade union federations (now under study by the Social and Economic Council). The unions' proposal is that employers should be obliged to pay into one or more central funds amounts (in shares or in cash) representing a given proportion of undistributed profits. The central funds would issue to workers certificates (non-negotiable for a certain period) and dividends. It is left open whether the distribution to workers would be governed by the profits of their own enterprise, or by average profits in their industry, or region.[28]

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[23] For a general summary of activities in various countries and for further reference, see G. Rehn, "An account of progress in manpower policies", *The OECD Observer*, April 1966.

[24] See especially Chapter 5. The results of extensive research into this question will be found in OECD, "Wages and Labour Mobility", Paris 1965. For the connexion with incomes policy, see especially the Foreword to that study by Professor P. de Wolff.

[25] The Secretariat is grateful to the International Labour Office for an account of the schemes described here. For a general discussion, and references to other literature, see OECD, "Non-wage incomes and prices policy: background report for a trade union seminar", by D. Robinson (Paris, 1966); and H. A. Turner and H. Zoeteweij, "Prices, wages and incomes policies", International Labour Office, 1966.

[26] This was an amendment to an Act of 1961 (known as the 312 DM Act, because 312 DM a year — about 2½ per cent of average wage-earnings for men — was the annual limit for employers' eligible contributions) under which such payments by individual employers would be tax-free. Under the original act, envisaging schemes in *individual firms*, schemes covering only about 1 per cent of the labour force had been adopted by 1963.

[27] The President of the Construction Workers' Union is Mr. Georg Leber, who had for long been a leading proponent of the capital-sharing principle. Under this scheme, employers pay 0.09 DM per hour (about two-thirds of the maximum) to every worker paying 0.02 DM from his pay into an approved savings scheme.

In Italy, the CISL (the second largest of the three trade union federations, linked with the Christian Democratic Party) proposed in 1964, after earlier attempts, a scheme for "contractual saving". Through collective bargaining, unions would negotiate with employers that a variable part of pay increases would be paid in the form of savings certificates (with a choice of maturity dates) issued by a National Investments Fund. Corresponding amounts of cash or of shares would be handed over by firms to the Fund. Participation in the scheme would be voluntary (workers could claim the whole of the negotiated increase in cash) — an aspect of the scheme which might reduce the effectiveness but is intended to render it more acceptable. It is uncertain whether the CISL proposal will receive support from the other union federations.

In France, too, there has been considerable discussion of schemes under which workers should be entitled to share in profits. Under one well-known proposal, put forward by M. Chalandon, firms would pay a certain proportion of undistributed profits into a National Labour Fund. The worker would receive titles to, and interest on, the assets of the Fund; these assets would be used for investment financing.[29]

Several motives lie behind all these proposals, most of them being of direct interest to incomes policy:

(i) *Wealth distribution.* Distribution of wealth among individuals is far more uneven than distribution of income, and this in itself accentuates and perpetuates the inequality of incomes. Thus one motive is simply to promote greater equality in wealth and income.

(ii) *Capital gains.* Ownership of wealth carries with it the possibility of capital appreciation. This further accentuates the unequal distribution of wealth (and so of income); moreover, gains through appreciation of the value of assets are particularly difficult to tax — thus enabling the owners of wealth to escape some of the fiscal consequences of inflationary increases in money incomes. As well, capital gains are extremely difficult to identify or measure and thus owners of wealth also escape the restraints that an incomes policy imposes on other income receivers. This applies particularly to equity shareholders. Dividends may be restricted in response to an incomes policy; but while wage- or salary-earners may sacrifice potential income, what the shareholder appears to lose he may in fact regain through bigger retained profits and consequent appreciation in the value of his assets (which will come back to him later in bigger dividends or in the chance of getting more for his shares). Thus the narrow ownership of wealth is an obstacle to the acceptance of an incomes policy, as well as to its fair execution.

(iii) *Investment and retained profits.* Resistance to pay claims is frequently based on the need for sufficient profits to meet investment requirements. But the level of investment is not necessarily closely correlated with the level of profits. The extent to which profits will in fact be used for investment is a matter for management decision and does not normally arise in pay bargaining. Moreover, the greater the amount of retained profits, the less the possibility of any kind of social control over the pattern or level of investment (a point especially emphasized by the Italian CISL). Thus one strand in the proposals for capital-sharing is the desire to reduce the proportion of private enterprises' investment financed from their internal resources. If the schemes for capital-sharing involve trade union control of the funds thereby accumulated, then the unions, as representatives of the workers, would acquire a measure of responsibility for the level and pattern of investment. This would, of course, require the unions to establish an adequate organization for taking part in investment management, both for their own financial security and because of the expected impact on general economic policy.

(iv) *Inflation.* To the extent that the allocation of property rights out of profits, implied by these schemes, becomes a substitute for a pay increase, and not an addition to pay increases, then the inflationary effect of the pressure for pay increases would be reduced. The schemes would in fact ensure that some part of pay increases is saved.[30] The consequences for inflationary pressures are, however, uncertain. The assumption that a distribution of profits would be a substantial substitute for normal pay increases is a large one. Even if this assumption were granted, the relief to inflationary pressure would be felt in total demand; but from the employers' point of view the payments might still be regarded as a cost, or like an extra tax on profits, and in certain circumstances would be passed on in prices.[31] A full discussion of this point would raise many problems similar to those involved in the analysis of the incidence of taxes on enterprise income.

Generally, therefore, the capital-sharing schemes are relevant to long-term policies for changing the distribution of income and of wealth, and for breaking the barrier between remuneration for work and remuneration of capital. The schemes might help to surmount some of the obstacles to securing workers' participation in a long-term incomes policy. They are relevant, too, to policies for influencing the level and pattern of investment, and, in particular, for associating trade unions with the formation of central economic policy. The impact of such schemes on the problem of inflation, however, must remain open to doubt.

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[28] It is suggested that non-profit bodies, government agencies, etc., should also pay equivalent sums into the fund so that all employed persons would receive titles to the assets of the fund.

[29] In 1966, during Parliamentary discussion of new company legislation, the "Vallon amendment" was passed, providing in general terms for the introduction of schemes entitling workers to a share in undistributed profits. Methods of implementing the amendment were referred for inquiry to a committee which took a somewhat negative view. More recently, discussion of this proposal has become active again.

[30] How far this would be so depends partly upon what limits are placed on workers' rights to dispose of their shares. The schemes put forward provide, in different ways, for such limits. It also depends on whether the extra savings under the scheme would be offset by drawing down other savings.

[31] See J. Pen, "How to buy off wage inflation". One of several papers for a Symposium on "The Labour Market and Inflation", organized by the International Institute for Labour Studies, Geneva 1966. The Symposium papers and proceedings are to be published later in 1967.

1.6. INTERNATIONAL IMPLICATIONS OF INCOMES POLICIES

It has been shown that one of the reasons prompting the efforts to introduce incomes policy, conceived as an anti-inflationary instrument, is the hope of improving a country's international competitiveness. It has also been suggested that even if an incomes policy succeeded in restraining a general increase in costs and prices, there is some doubt whether this could in itself be expected to have a very marked influence on an economy's international competitiveness; experience suggests that the connexion between competitiveness in international trade and relative changes in the general level of domestic costs and prices is not a very direct one, and that many other factors determine competitiveness.

To the extent, however, that incomes policies might be regarded as influencing international competitiveness, then such policies, if generally adopted, could be treated as instruments either for competition, or for co-operation in the interests of international equilibrium. In this respect, incomes policies might, in principle, be used in much the same way as domestic demand policy or monetary policy, or as exchange rates might be used if frequent variability of exchange rates were accepted. Hitherto the solution has been adopted (apart from occasional emergencies) of fixed exchange rates, thus throwing the burden of adjustment on to other instruments of policy. Some progress is being made, through the machinery for international discussion, towards co-ordinating the use of demand policy, of monetary and capital market policy (e.g. of short-term interest rates). It is conceivable that incomes policies might also enter the area of international co-operation.

It is easy to see the difficulties that might arise. It is to be expected that the main function of incomes policy (regarded, again, purely in its short-term aspect) will continue to be seen as the restraining of pay and price increases. Most governments, in these conditions, will seek to apply as much restraint as is within their power. But their varying abilities to apply restraint are not necessarily correlated with their need for it. Thus it is easy to urge countries in balance-of-payments difficulties to strengthen the restraints on increases in income; this is already common practice. But if strong restraint is in fact impracticable, the alternative — of encouraging increases in pay and prices in countries with an easy balance-of-payments position — is less acceptable. Few governments are prepared to admit to excessive surplus positions which should be modified by such measures.

These are, however, difficulties of a kind which have arisen in every attempt to promote international equilibrium through co-ordination of economic policy. Incomes policies could play a certain part in overcoming them, if the objective of promoting equilibrium through co-ordination of economic policies generally were recognized and pursued.

What has been said concerns chiefly incomes policy as a possible way of helping to promote equilibrium between the competing industrialized countries. There is, however, another way in which international considerations could enter into anti-inflationary incomes policies. This concerns the price relationships between industrial countries generally and the primary producing countries.

It has been maintained that there are permanent reasons why the terms of trade between these two groups of countries can be expected to continue to move in favour of the industrial economies. The basic reason is the lower income elasticities, in the industrial countries, for most primary products than for most industrial goods and for most services. Put in another way, it has been shown, for example, by Dudley Seers, that the "primary product content" of items of expenditure with a high income elasticity is substantially less than that of items with a low income elasticity.[32] In itself, this gives rise to a built-in tendency for the incomes of primary producing economies to rise more slowly than the incomes of industrial economies.

This tendency is accentuated by other, less unavoidable, characteristics of the two types of economy to which Dr. Prebisch has called attention. First, the pressure of excess labour supply in the primary producing economies generally means that increases in efficiency in primary production — which may well be as great as those in industry — tend not to be reflected in the real incomes of the producers; a large part of these gains may indeed be shifted to the industrial economies in the form of lower primary product prices. On the other hand, in conditions of full employment in the industrial countries, the pressure of demand for labour brings about a steady increase in the export prices of the goods sold to the primary producers.[33]

This feature of relationships between the two groups of economies is, as has been pointed out, modified by the fact that export prices in the industrial countries have not fully reflected the inflationary increases in their domestic price levels. Nevertheless, the movement in terms of trade against primary producers has been sufficient to offset much of the flow of grants and investments from the industrial to the primary producing economies. To the extent that anti-inflationary incomes policies in the industrial countries (or any other anti-inflationary policies which do not reduce demand for imports of primary products) could succeed in checking the rise in export prices of industrial goods, such policies would contribute something towards reducing the income disparities between the primary and industrial producers.[34]

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[32] Dudley Seers, "A model of comparative rates of growth in the world economy", *Economic Journal*, March 1962.

[33] "Towards a new trade policy for development", Report by Secretary-General, *Conference on Trade and Development*, 1964, Vol. II, United Nations, 1964.

Moreover, it may be suggested that the one form of incomes policy which has been applied in most industrial countries has intensified the income disparity between primary producing and industrial economies. This is the policy of maintaining by various supports and subsidies agricultural — and other primary producers' — incomes in the industrial countries. This is the way in which governments in the industrial countries attempt to solve within their own borders the structural problem of disparities in growth of demand between primary and industrial products. But so far as such supports still further reduce demand for imports of primary products, they aggravate the international income disparity.[35]

The problems raised are, clearly, far wider than can be solved by incomes policy in the industrial countries, and the contribution of such income policies to their solution is bound to be a minor one. Nevertheless, it is a potential contribution which cannot be neglected. It is suggested at various points in this study that if incomes policies are to become meaningful in western Europe, then their objectives must extend beyond the solution of short-term economic problems and must incorporate standards of social equity which have not yet been sufficiently formulated. There is no reason why the application of such standards should be limited by national boundaries.

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[34] The argument applies, of course, only to the extent that the economies which depend for export income mainly on primary production are also economies with low income per head, which is not invariably the case.

[35] It is pointed out by Dr. Prebisch that the social objective of redistributing income within the industrial countries could be achieved by a price or income policy "which does not encourage marginal production in the industrialized countries and which guarantees the developing countries a reasonable share in consumption". This implies income or price support to primary producers in the industrial countries which is not linked to the volume of output. ("Towards a new trade policy for development", *op. cit.*, pages 10 and 26.)

CHAPTER 2

THE ANATOMY OF INCOME AND PRICE CHANGES

In the early postwar years, inflationary pressures in western Europe were regarded as a temporary consequence of the process of reconstruction and of meeting the backlogs of consumer needs and investment requirements. No permanent threat to monetary stability was generally expected. Similarly, the price rises that followed the outbreak of the Korean War were considered to be merely transitory disturbances, and, in fact, they were greatly diminished as soon as the speculative purchases and temporary shortages disappeared. The year 1952 was one of readjustment and in 1953 a new period of economic expansion started. Rising prices proved to be a continuing problem, until the distortions provoked in economic structures and the imbalances in international payments became serious hindrances to the continuation of economic growth. A short period of readjustment, marked by a considerable decline in the rate of growth of output, followed in most western European countries in 1958 or 1959. After that, economic expansion started again. The conditions experienced in the previous upturn were repeated: high levels of employment and high rates of growth of output were accompanied by persistent price rises, generally more widespread and more rapid than in the 1950s. The pressures of excess demand, and balance-of-payments dislocations, led to other periods of readjustment, involving fairly drastic corrective measures, particularly in Italy (in 1964), in France (1964) and the United Kingdom (1961-1962 and 1965-1966).

The purpose of this chapter is: *first*, to summarize the behaviour of prices during the years since 1953; *second*, to analyse the cost structure of the price changes to identify the impact of each cost component on the general level of prices; *third*, to describe the changes over time, and differences among countries, in the distribution of income between factors of production. Most of the analysis terminates in 1964, the latest year for which statistics of national accounts in sufficient detail are generally available.

2.1. THE BEHAVIOUR OF PRICES, 1953 TO 1964

At the beginning of the period under examination, prices were fairly stable in nearly every country, after the strong inflationary waves generated by postwar reconstruction and by the outbreak of war in Korea. This does not imply that prices were in "equilibrium" at that time. Price structures were often influenced by government price controls, and relative price levels in different countries had not been fully adjusted to the devaluations of the late 1940s or to the aftermath of the Korean War.[1]

The period can be conveniently broken down into two sub-periods, 1953 to 1958 and 1958 to 1964, which roughly cover two business cycles: the boom of 1953 to 1957 and the subsequent slackening of economic activity in 1958; and the revival which started again in 1959 or 1960. Significant differences between these two phases will be observed.

The price indices used in this chapter (except where otherwise specified) are the implied deflators in national accounts, obtained by dividing changes in the aggregates at current prices by changes in the aggregates at constant prices. They may therefore differ from other price indices commonly used, for example, official indices of consumer prices, investment prices, and import and export prices. First, the coverage is usually different: for example, the implied deflator for consumer expenditure in national accounts covers total consumption and is weighted according to the expenditure pattern of the community as a whole, while the "basket" to which a consumer price index refers is usually based on the expenditure pattern of a limited part of the community (for instance, cost-of-living indices geared to working-class budgets). Second, the implied deflators in national accounts are usually current weighted, while the official indices are most often base weighted, so that the former reflect changes in the pattern of expenditure, while the latter do not.[2]

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[1] For details on the nature of distortions in the price structure within each country and between countries at the outset of the period, see *The Problem of Rising Prices*, OEEC, Paris 1961.

[2] The different criteria used in the construction of the official consumer price index and in the national accounts implied index do not give, in the majority of cases, striking differences in the total price change in such a short period as a decade, mainly because differences in the item carrying the highest weight, food, are not large. Nevertheless, for other individual items divergences may be important, as is shown by the following comparisons for selected items in a few countries:

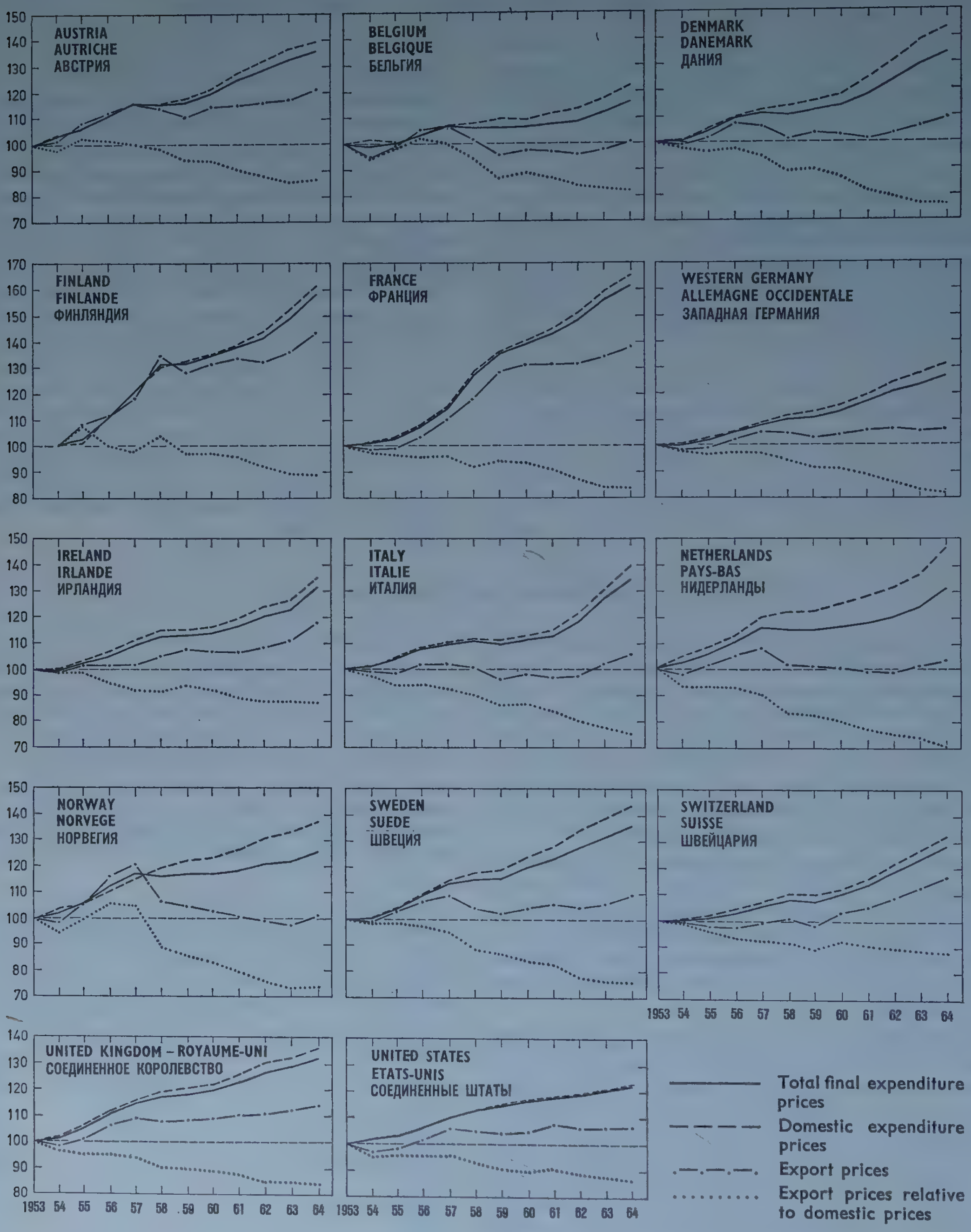
	Indices for 1964 (1953 = 100)	
	Price indices implicit in national accounts	*Official price indices*
Austria		
Rent and water charges	188.2	135.5
Fuel and light	100.5	118.0
Belgium		
Rent and water charges	124.5	(not covered)
Fuel and light	109.5	121.4
France		
Rent and water charges	273.6	321.5
Norway		
Food	147.3	150.0
Clothing and personal effects . . .	113.3	119.0
Rent and water charges	195.8	151.0

But the largest differences are often in the service items, for which a direct comparison is made difficult by different definitions and classifications.

CHART 2.1

Prices of total final expenditure, domestic expenditure and exports, 1953 to 1964

Indices, 1953 = 100



Sources: United Nations, *Yearbook of National Accounts Statistics;* and national statistics.

NOTE. — The price indices are implied prices in national accounts, obtained by dividing series at current prices by series at constant prices. Domestic expenditure covers private consumption, public consumption and gross domestic capital formation. Exports cover goods and services. Total final expenditure covers domestic expenditure plus exports of goods and services. The indices of relative export prices have been obtained by relating the indices of export prices to the indices of domestic expenditure prices.

Chart 2.1 shows for thirteen western European countries, and for the United States, the price indices (base 1953=100) for the period 1953 to 1964 of total final expenditure, domestic expenditure and exports of goods and services, and also export prices in relation to domestic prices.[8] The overall level of prices, represented by prices for total final expenditure, generally rose during each of the two booms, but slowed down during the recession in 1958 or 1959. The price rises, in general, were not impressively faster in the second boom than in the first. In Finland, Norway and the United Kingdom the overall price rise was, in fact, less in the second phase. But in Belgium, Denmark, Italy, Switzerland and, to a less extent, in western Germany the rise was more pronounced after 1958; these were all countries with relatively moderate price increases in the first period, and in Belgium the rate of price increase has been very small throughout the decade. The chart further suggests that the range of price changes has tended to narrow from the first to the second period. It may be noted that the relative stability of prices in the United States during the last few years contrasts remarkably with sharp rises in Europe; in the United States, from 1958 to 1964 the overall level of prices rose on the average only about 1½ per cent per year.

When total final expenditure is split between goods and services sold on the home market and goods and services exported, a marked difference appears. Export prices tended to rise throughout much less than domestic prices in all countries. One reason for this is the large proportion of manufactured goods in western European exports: industrial prices have generally tended to rise less than prices of other items of final expenditure. Moreover, the prices for exported manufactures, as shown below, have generally exhibited a marked tendency to rise less than domestic industrial prices. Another reason is the shift in composition of exports (reflected in current weighted indices), which is likely to be towards items where the price increases are least. This kind of bias would be more important for internationally traded goods than for other items of total final expenditure.

Nevertheless, the share of services in total exports of goods and services in some of the countries is far from negligible:

Share of services in total exports of goods and services, 1953 and 1964

	Percentages	
	1953	*1964*
Austria	15.9	33.1
Belgium	15.8	18.2
Denmark	21.6	22.7
Finland	13.4 [a]	9.5
Western Germany	13.9	16.5
Ireland	29.6	28.4
Italy	28.5	29.3
Netherlands	27.8	23.8
Norway	51.7	50.5
Sweden	9.7	5.7
Switzerland	22.9	27.2
United Kingdom	27.2	26.6
United States [b]	15.7	18.1

Source : United Nations, *Yearbook of National Accounts Statistics*, 1965.

[a] 1954. [b] Excluding freight and insurance.

Changes in prices for exported services have variously affected the total price index for exports of goods and services. The table below shows the differences between the changes in export prices for goods and services and for goods only between 1953 and 1964.

Indices of export prices in 1964 (1953=100)

(in national currencies)

	Goods and services	*Goods only*
Austria	121	103
Belgium	100	97
Denmark	109	104
Finland [a]	144	145
France	138	141
Western Germany	106	104
Ireland	118	111
Italy	106	87
Netherlands	104	103
Norway	101	105
Sweden	109	106
United Kingdom	114	118
United States	106	109

Sources: United Nations, *Yearbook of National Accounts Statistics*, 1965; and national statistics.

[a] 1954 = 100.

The difference is, of course, particularly marked in countries such as Austria and Italy, where tourist receipts account for a large share of the exported services, and where the rise of domestic prices in general, and of services in particular, must exercise a more direct influence on total export receipts.

The behaviour of prices for exports of goods and services, relatively to domestic prices, was somewhat different in the course of the two periods. In several countries, the fall in relative export prices was much more marked after 1958 than before — in Belgium, Finland, western Germany, Italy, the Netherlands and Norway. But in Switzerland and the United Kingdom the decline in relative export prices was distinctly less after 1958 than in the earlier period.

Table 2.1 sums up the global changes in prices for total final expenditure, domestic expenditure and exports between 1953 and 1964. Price increases for domestic expenditure (i.e. goods and services sold on the home market) ranged between 22 per cent and 65 per cent. In seven countries, Belgium, western Germany, Switzerland, Ireland, the United Kingdom, Norway and Austria, the total rise was less than 40 per cent. In the other six countries it ranged between 40 and 65 per cent. Export prices for all goods and services at the end of the period were at about the same level as at the beginning, or not much above, in Belgium, Norway, the Netherlands, Italy and western Germany. In another group of countries — Denmark, Sweden, the United Kingdom, Switzerland, Ireland and Austria — export prices rose between about

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[8] Total final expenditure (or total available resources) includes total domestic expenditure (private consumption, public consumption and gross domestic capital formation) plus exports of goods and services. It corresponds to gross domestic product at market prices plus imports of goods and services.

TABLE 2.1

Prices for total final expenditure, domestic expenditure and exports, 1953 to 1964

Indices for 1964, 1953 = 100

Country	Total final expenditure		Domestic expenditure		Exports of goods and services		Relative export prices	Share of exports of goods and services in total final expenditure	
	Price index	Rank	Price index	Rank	Price index	Rank		1953	1964
Austria	136	10	139	7	121	11	86.8	16.2	20.2
Belgium	116	1	122	1	100	1	82.1	21.6	26.8
Denmark	134	8	143	9	109	6	76.4	23.5	23.1
Finland [a]	158	12	162	12	144	13	88.9	17.3 [b]	17.2
France	161	13	165	13	138	12	83.5	12.9	12.6
Western Germany	126	2	130	2	106	4	81.3	15.2	17.0
Ireland	131	6	136	4	118	10	87.1	22.7	23.3
Italy	135	9	140	8	106	4	75.6	9.6	14.5
Netherlands	131	5	146	11	104	3	70.9	33.5	31.4
Norway	126	3	137	6	101	2	73.6	26.8	29.3
Sweden	136	11	144	10	109	7	76.2	20.8	20.6
Switzerland	129	4	132	3	117	9	88.3	22.8	22.0
United Kingdom	132	7	136	5	114	8	84.1	17.8	15.6
United States	122		130		106		81.3	4.0	4.8

Source: United Nations, *Yearbook of National Accounts Statistics*, 1965. [a] 1954 = 100. [b] 1954.

NOTE. — The price indices are the implied deflators in national accounts, obtained by relating series at current prices to series at constant prices.

10 and 20 per cent, while in Finland and France they increased by about 40 per cent.[4]

In view of the importance attached to the association between internal price increases and international competitiveness, it is worth noting at this stage the lack of correspondence between the two overall indices. It is true that Finland and France had the biggest increases in both domestic and export prices, and that Belgium and western Germany had among the smallest increases in both series. But some countries show a remarkable lack of correspondence: for example, the Netherlands had among the biggest increases in domestic prices and among the smallest in export prices; Ireland and Switzerland were in the reverse case.

These differences between home market and export prices also emerge when changes in export prices for manufactures are compared with those of internal prices for manufactures, as is shown by the following figures for 1958-1964.

The combined effect of declining export prices relative to home prices, and of an increasing proportion of exports to total final expenditure, at constant prices, was that the share of exports in total final expenditure at *current* prices remained fairly stable throughout the period in most countries. Only in Austria, Belgium and Italy, in fact, has the share of exports in total final expenditure, in current values, shown a significant increase.

Index numbers of wholesale prices and export prices (unit value) for manufactured goods in selected western European countries, 1964

(1958=100)

	Wholesale prices	*Export unit value*
Belgium	107	100
France	122	120
Western Germany	108	104
Netherlands	109	101
Italy	110	99
Sweden	115	107
United Kingdom	112	109

Sources : National statistics.

NOTE. — The price data do not in all cases cover all manufactured goods. Wholesale prices for France relate only to "intermediate products"; for the United Kingdom they exclude export sales and all food, drink and tobacco. Export unit values cover "finished goods" or "more elaborate goods" for Belgium, Italy and western Germany.

Price changes for domestic expenditure

Price rises for domestic expenditure are analysed by main components in Table 2.2. The behaviour of prices for investment goods, relatively to prices for consumer expenditure, varies between countries. In Austria, Belgium, western Germany, Switzerland and the United States, prices for investment goods tended to rise faster than consumer prices in both periods. In the Netherlands and Norway investment prices rose faster than consumer prices in 1953-1958, but this tendency was reversed in 1958-1964; the opposite occurred in Sweden and Italy. In Denmark, Finland, France, Ireland and the United Kingdom investment prices rose less than consumer prices in both periods. The implied prices for public consumption rose faster than average nearly everywhere.

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[4] The following changes in official exchange rates during the period should be kept in mind: Finland (1957) devaluation of 28 per cent; France (1957 and 1958) devaluation of 29 per cent; western Germany (1961) revaluation of 4½ per cent; Netherlands (1961) revaluation of 4½ per cent.

The difficulties of computing such prices are notorious, and little significance can be attached to the precise figures. Nevertheless, public consumption, with its higher service content, has inevitably contributed disproportionately to the overall rise in prices.

Table 2.2 also shows how much consumer prices, investment prices and public consumption prices, respectively, contributed to the total rise of domestic prices. These shares may be compared with the percentage weights of the three items in total domestic expenditure.[5]

Price changes for particular consumer goods and services

Food prices have on the whole exercised a moderating influence on the rise in consumer prices (see Table 2.3). In 1953-1958 food prices rose more than average only in three countries (Finland, Norway and the United Kingdom) — and only in Norway was the relative increase in food prices substantial. In 1958-1964, an increase in relative food prices was rather more common; it occurred in Denmark, Italy, the Netherlands, Norway again and Sweden — being most marked this time in Sweden. In this latter period, it was in Italy that the rise in food prices contributed most (45 per cent) to the overall rise

TABLE 2.2

Price changes for domestic expenditure by main items, 1953-1958 and 1958-1964

Country and period		Price rises for domestic expenditure *(compound annual rates)*				Percentage contribution to price rise for domestic expenditure			Percentage weights in total domestic expenditure *(end of period)*		
		Total	*of which:*								
			Private consumption	Public consumption	Gross domestic fixed capital formation	Private consumption	Public consumption	Gross domestic fixed capital formation	Private consumption	Public consumption	Gross domestic fixed capital formation
Austria	1953-1958	2.9	2.4	7.5	2.8	52.6	32.4	22.1	62.4	14.0	22.2
	1958-1964	3.3	2.9	5.2	3.7	52.4	19.2	26.9	60.6	13.4	24.9
Belgium	1953-1958	1.5	1.2	1.9	2.9	54.9	15.6	32.0	70.6	12.3	17.1
	1958-1964	2.1	1.8	1.6	2.9	59.4	10.3	29.3	65.6	12.7	21.2
Denmark	1953-1958	2.6	2.3	4.8	1.7	62.8	23.4	11.7	69.3	13.5	17.7
	1958-1964	3.9	3.9	6.3	3.1	62.2	21.4	17.5	62.5	14.2	21.3
Finland	1954-1958	6.8	6.7	8.6	4.0	59.7	15.5	15.6	61.1	12.8	25.2
	1958-1964	3.7	3.9	5.8	3.7	60.4	19.8	25.3	57.3	13.5	25.0
France	1953-1958	5.1	4.8	7.3	4.2	64.1	18.3	16.4	65.4	13.3	19.1
	1958-1964	4.3	4.1	6.0	3.9	61.9	17.6	19.2	64.1	13.3	20.9
Western Germany	1953-1958	2.1	1.9	3.4	2.0	56.2	21.9	21.7	61.9	13.8	22.7
	1958-1964	2.7	2.2	3.6	3.5	47.2	19.4	33.2	56.9	15.2	26.7
Ireland	1953-1958	2.8	2.8	3.0	2.6	76.2	12.7	12.4	76.3	11.7	13.3
	1958-1964	2.8	2.5	5.5	2.3	62.0	22.0	14.7	67.9	12.3	18.0
Italy	1953-1958	2.3	2.3	3.4	1.5	70.7	23.4	15.0	64.2	14.7	20.5
	1958-1964	3.8	2.9	7.7	3.9	48.3	29.9	21.5	61.5	16.8	21.2
Netherlands	1953-1958	4.1	3.1	6.9	4.8	47.4	23.5	27.2	61.2	15.1	23.5
	1958-1964	3.1	2.8	6.4	2.3	52.0	28.0	19.0	57.0	15.0	24.9
Norway	1953-1958	3.6	3.2	4.6	4.1	49.9	16.5	34.5	56.3	13.4	31.2
	1958-1964	2.4	2.6	4.1	1.6	61.3	25.4	20.0	55.9	15.4	28.3
Sweden	1953-1958	3.3	3.3	4.4	2.3	61.3	22.9	14.8	61.7	17.7	20.8
	1958-1964	3.4	2.9	4.8	3.6	49.7	25.2	24.9	57.1	18.5	23.4
Switzerland	1953-1958	2.0	1.7	2.9	2.2	59.9	18.0	22.9	67.8	12.6	20.5
	1958-1964	3.1	2.1	4.4	4.8	40.9	16.2	42.2	57.6	11.9	29.0
United Kingdom	1953-1958	3.6	3.2	5.5	3.1	62.1	24.4	13.5	67.8	16.6	15.1
	1958-1964	2.2	2.0	4.0	1.5	58.6	28.6	11.8	64.3	16.6	17.5
United States	1953-1958	2.5	1.7	4.5	2.9	47.8	33.2	20.2	64.3	18.7	17.0
	1958-1964	1.5	1.2	2.6	1.3	51.4	32.3	15.7	63.6	18.8	17.0

Sources: United Nations, *Yearbook of National Accounts Statistics;* and national statistics.

NOTE. — Price rises have been calculated on the basis of implied price indices derived from national accounts data. The percentage weight of each item in the total price rise of domestic expenditure has been calculated as follows:

$$w = \frac{q_t\ P_t}{\Sigma\ q_t\ P_o} - \frac{q_t\ P_o}{\Sigma\ q_t\ P_o}$$

where: w is the weight of contribution of price rise of each item to the total price rise;
q_t and P_t are respectively the quantity and the prices of each item in the final year;
q_o and P_o are respectively the quantity and the prices of each item in the base year.

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[5] The weights of the three items do not add to 100, because changes in stocks are not taken into account.

TABLE 2.3

Price changes for consumer expenditure by main items, 1953-1958 and 1958-1964

Country and period		Price rises for consumer expenditure (compound annual rates)							Percentage contribution to price rise for consumer expenditure						Percentage weights in total consumer expenditure (end of period)					
		Total	Food	Drink	Tobacco	Rent	Manufactured goods	Other	Food	Drink	Tobacco	Rent	Manufactured goods	Other	Food	Drink	Tobacco	Rent	Manufactured goods	Other
Austria	1953-1958	2.4	— 2.3 —		2.3	3.9	1.8	2.6	— 43.4 —		2.9	7.6	16.4	29.7	— 44.7 —		2.9	4.7	20.5	27.2
	1958-1964	2.9	— 2.8 —		1.7	7.6	2.3	2.7	— 38.5 —		1.7	12.7	17.8	29.3	— 39.0 —		2.8	5.6	21.9	30.7
Belgium	1953-1958	1.2	1.0	1.3	1.0	2.8	0.7	0.9	24.1	5.9	2.0	30.5	10.9	26.6	28.9	5.4	2.2	13.1	17.3	33.0
	1958-1964	1.8	1.9	0.9	1.5	1.3	1.0	2.6	25.9	2.7	1.7	7.8	10.9	51.0	25.8	5.2	2.1	10.7	19.2	37.1
Denmark	1953-1958	2.3	1.5	— 2.0 —		4.9	1.8	2.8	16.9	— 8.7 —		15.9	15.1	43.4	25.9	— 10.1 —		8.1	19.4	36.5
	1958-1964	3.9	4.3	— 4.3 —		5.3	2.3	3.9	24.4	— 12.0 —		11.0	12.4	40.2	22.0	— 10.7 —		8.2	19.9	39.1
Finland	1954-1958	6.7	7.5	8.9	11.7	16.2	1.0	5.7	39.5	5.7	5.0	21.5	2.7	25.6	36.1	4.5	3.2	10.9	15.7	29.6
	1958-1964	3.9	3.3	3.5	4.4	5.4	2.9	3.2	29.7	4.7	4.0	16.4	13.1	32.2	31.2	4.6	3.2	11.2	15.4	34.4
France	1953-1958	4.8	4.0	9.8	3.3	10.6	2.6	5.1	27.0	15.3	1.4	9.1	9.8	37.4	31.8	8.7	1.9	4.8	17.2	35.6
	1958-1964	4.1	3.7	2.6	6.7	8.8	2.9	4.5	26.6	4.4	2.5	13.3	13.1	40.1	29.4	6.6	1.7	7.2	18.1	37.0
Western Germany [a]	1953-1958	1.9	— 1.6 —			2.2	1.6	2.3	— 35.8 —			7.9	23.2	33.1	— 40.0 —			6.8	26.3	26.9
	1958-1964	2.2	— 1.8 —			5.5	2.1	2.1	— 28.9 —			19.9	23.0	28.1	— 36.0 —			9.1	25.0	30.0
Ireland	1953-1958	2.8	2.6	2.7	5.0	3.5	1.0	3.4	36.0	8.2	13.7	7.3	5.8	29.0	37.7	8.6	8.1	6.0	15.4	24.3
	1958-1964	2.5	1.8	4.0	5.7	3.8	2.2	2.0	23.6	15.0	16.1	8.6	16.2	20.5	32.2	10.1	8.0	6.0	18.5	25.2
Italy	1953-1958	2.3	1.6	4.5	0.8	15.7	0.1	1.5	33.6	12.4	1.5	35.1	0.7	16.8	45.6	6.5	4.4	7.1	12.7	23.8
	1958-1964	2.9	3.1	0.8	2.7	8.9	2.4	1.9	45.1	1.8	3.5	20.3	10.5	18.8	42.3	6.0	3.8	8.0	12.4	27.6
Netherlands	1953-1958	3.1	2.8	2.3	2.7	7.4	0.3	4.6	31.0	2.5	4.4	16.8	3.0	42.3	32.7	3.1	4.7	7.5	23.9	28.1
	1958-1964	2.8	2.9	1.0	2.7	6.7	1.3	3.3	30.2	1.3	3.6	16.8	13.0	35.1	29.4	3.3	3.6	7.9	25.9	29.8
Norway	1953-1958	3.2	4.2	1.7	3.0	9.4	1.1	2.8	39.7	2.6	3.0	19.4	7.9	27.4	31.5	4.7	3.1	7.9	22.0	30.8
	1958-1964	2.6	3.1	2.9	3.7	3.8	1.0	2.9	33.9	5.2	4.2	10.4	9.0	37.3	29.0	4.7	3.1	7.4	21.9	34.0
Sweden	1953-1958	3.3	2.9	9.0	2.6	5.0	1.2	3.3	26.1	14.9	2.6	14.0	8.0	34.5	28.3	6.2	3.1	9.4	19.7	33.4
	1958-1964	2.9	4.1	3.7	2.4	3.1	2.1	2.3	35.5	7.8	2.6	10.0	14.6	29.4	26.1	6.3	3.1	9.4	19.5	35.6
United Kingdom [b]	1953-1958	3.2	3.5	1.3	2.1	5.5	1.1	4.2	32.4	2.6	4.6	15.3	6.5	38.6	29.9	5.9	6.7	9.4	17.7	30.3
	1958-1964	2.0	1.6	1.7	4.1	4.9	1.1	1.6	21.9	5.3	12.0	23.4	9.9	27.6	26.3	6.2	6.3	10.6	17.0	33.7

Sources and methods: See Table 2.2.

NOTE. — Rent includes maintenance and water charges; manufactured goods (other than food) include clothing, furniture, and household equipment; the residual item covers all services (except rent) as well as manufactured goods not covered by other items.

[a] Manufactured goods include household operation.

[b] Non-alcoholic beverages are included in food.

in consumer prices, but not so much because of a strikingly large rise in food prices, as because of the very high weight of food in total consumers' expenditure (over 40 per cent).

Food prices are particularly subject to a variety of special influences besides domestic agricultural costs: harvests, agricultural price and subsidy policies, import policies and world prices, indirect taxation and changes in the processing and distributive margins. Only in three countries was there, as a result of one or more of these factors, a considerable acceleration in the rate of price increase between the two periods covered — Denmark, Italy and Sweden. Before 1958, Denmark and Italy (but not Sweden) enjoyed exceptionally small increases in food prices; after 1958, the increases were well above the western European average. In the United Kingdom, with its wider dependence than most countries on food imports, the rise in food prices slowed down after 1958 to about the smallest increase in western Europe.[6]

Changes in the prices of drink and tobacco show little consistent relationship with other price changes, being largely determined by the rates of indirect taxation. Only in Denmark, Ireland and the United Kingdom did drink and tobacco prices contribute substantially to the overall price increase after 1958 because of large (tax-induced) increases in relative prices.

In nearly all countries rents have increased more than consumer prices generally. In several countries this must be ascribed partly to delayed increases in controlled rents or to the progressive removal of controls. At the same time, housing shortages, the relative rise in construction costs and maintenance, and the widespread rise in the price of urban land have had an effect on rents of new houses and on free rents generally. As a result, the weight of rent in consumers' expenditure has generally risen, and is now much more uniform than it was at the beginning of the period: in 1964 it ranged between 7 and 11 per cent everywhere except in Austria and Ireland (5 per cent). Yet rent increases accounted for more than 15 per cent of the overall price rise in five countries in 1958-1964, and for nearly a quarter of it in the United Kingdom.

The item "manufactured goods" in Table 2.3 does not in fact cover all manufactured goods but only clothing and other personal effects and furniture, furnishings and household equipment. Their prices have exerted a moderating effect on the overall price rise. Although in some countries they increased in the second period considerably faster than in the first, their impact on the total price rise was in both periods less (in some cases considerably less) than their weight in total expenditure.

The residual item in Table 2.3 includes a mixed bag of goods and services. The usual classification of consumer expenditure is on a functional basis which does not allow a clear distinction between goods and services. For example, under the item "household operation" domestic services are included, but also manufactured goods such as detergents, etc. Similarly, the item "personal care and health expenses" includes not only expenditure on services, such as doctors and hairdressers, but also manufactured goods such as soap and pharmaceuticals. The item "transport and communication" covers not only fares paid for transportation services, but also the amounts spent for the purchase of vehicles, and so on. So, although this item covers all services (except rent), the inclusion in it of a considerable number of manufactured goods must have a moderating effect on its price index. The increase in this residual item as a whole, since it covers 25-40 per cent of total expenditure, is naturally not very different from the overall increase in consumer prices.

For three countries, Belgium, France and the United Kingdom, it has been possible to derive, from national accounts data, separate implied price indices for most manufactured goods (excluding food, beverages and tobacco) and services (excluding rent). These price changes are shown below. An attempt has been made to show separately changes for services for which prices are by and large determined by public authorities and for "free market" services.[7]

Price changes for manufactured consumer goods and services in Belgium, France and the United Kingdom, 1953 to 1964

Compound annual rates of growth

	Manufactured goods (excluding food, drink and tobacco)	*Services (excluding rent)*		
		Total	*of which: Government controlled*	*of which: Free market*
Belgium				
1953-1958	0.7	2.3	2.1	2.3
1958-1964	1.1	2.6	2.4	2.6
1953-1964	0.9	2.4	2.3	2.5
France				
1953-1958	2.7	6.2	4.6	6.5
1958-1964	2.9	7.2	5.3	7.6
1953-1964	2.8	6.7	5.0	7.1
United Kingdom				
1953-1958	1.8	4.3	4.9	4.1
1958-1964	0.6	2.8	3.7	2.5
1953-1964	1.2	3.5	4.2	3.2

Sources: Belgium : *Etudes statistiques et économétriques*, No. 13, 1966; France : *Consommation, Annales du CREDOC*, 1961, Nos. 3-4, and 1966, No. 2; United Kingdom : *National Income and Expenditure*, 1964 and 1965.

NOTE. — Price changes are derived from implied price indices in national accounts obtained by dividing series at current prices by series at constant prices.

As is to be expected, in all three countries, prices for manufactures have risen considerably less than prices for services. This is normally ascribed to the faster rate of growth of productivity in the manufacturing sector; an additional factor may well be the exposure of the manufacturing sector to import competition. In Belgium and France, prices for publicly controlled services have risen less than prices for other services, while the opposite happened in the United Kingdom. Prices charged by public enterprises, or controlled by public authorities, tend to be influenced by policy, and it is quite common for adjustments to lag behind free market prices. The sharper increase of these prices in the United Kingdom, relatively to prices for other services, in part reflects the fact that the controlled prices had been rather firmly held down before 1953.

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[6] The system of agricultural support is based on income subsidies to farmers rather than on maintaining selling prices above world level.

[7] Services for which prices are determined by public authorities are limited to public transport and communications. Prices for public utilities have not been included. The category of goods does not cover petrol and other items used for running vehicles. The reason is that it has not been possible to divide the item "Running costs of vehicles" into goods and services. Similarly, the total for services also does not include running costs of vehicles. A few other minor gaps make the series for the three countries not fully comparable.

The increasing weight of services in total consumer expenditure, the result of high income elasticity for many of them, inevitably creates a long-term tendency to put pressure on the overall price level for consumers.

Price changes for investment goods

Over the whole period 1953 to 1964, prices for construction tended to rise more than prices for machinery and equipment — the latter category including transport equipment (see Table 2.4). This tendency, which was present in most countries before 1958, became more general and more marked thereafter. In 1958-1964, while expenditure for construction was generally about half of gross capital expenditure, it was on average responsible for about three-quarters of the rise in prices of investment goods in total. Construction prices rose far more than prices for machinery and equipment and, with the single exception of the United Kingdom, more than prices for domestic expenditure in total. It is true that methods of estimating construction prices are not well developed in many countries and present almost insuperable difficulties. In most cases, they are based on wages and the price of materials, with, possibly, some rather arbitrary assumptions about changes in productivity. Even if the estimates are taken only as representing the right orders of magnitude, it appears that the contribution of construction to the general rise in prices has been surpassed only by that of public consumption (where the difficulties of price estimation are at least as great) and by increases in rent, in part attributable to the rise in construction costs itself.

Table 2.4

Price changes for gross domestic fixed capital formation by main items, 1953-1958 and 1958-1964

Country and period		Price rises for gross domestic fixed capital formation (compound annual rates)			Percentage contribution to price rise for gross domestic fixed capital formation		Percentage weights in total gross domestic fixed capital formation (end of period)	
		Total	Construction	Machinery and equipment	Construction	Machinery and equipment	Construction	Machinery and equipment
Austria	1953-1958	2.8	4.8	1.1	79.0	21.0	47.7	52.3
	1958-1964	3.7	4.5	2.9	59.7	40.3	50.4	49.6
Belgium	1953-1958	2.9	3.0	2.8	57.5	42.5	55.9	44.1
	1958-1964	2.9	3.8	1.6	77.2	22.8	60.5	39.5
Denmark	1953-1958	1.7	2.4	0.9	66.3	33.7	45.0	55.0
	1958-1964	3.1	4.7	1.7	71.6	28.4	50.0	50.0
Finland	1954-1958	4.0	3.6	4.8	61.3	38.7	67.7	32.3
	1958-1964	3.7	4.3	2.8	69.3	30.7	60.7	39.3
France	1953-1958	4.2	5.6	2.9	68.8	31.2	54.8	45.2
	1958-1964	3.9	4.2	3.4	61.9	38.1	57.8	42.2
Western Germany	1953-1958	2.0	3.0	1.0	73.2	26.8	49.2	50.8
	1958-1964	3.5	5.8	1.3	81.5	18.5	52.7	47.3
Ireland	1953-1958	2.6	2.5	2.8	51.0	49.0	53.4	46.6
	1958-1964	2.3	3.1	1.2	77.3	22.7	58.5	41.5
Italy	1953-1958	1.5	2.7	0.1	97.7	2.3	60.7	39.3
	1958-1964	3.9	5.5	1.4	85.8	14.2	63.9	36.1
Netherlands	1953-1958	4.8	6.8	2.1	75.7	24.3	52.7	47.3
	1958-1964	2.3	3.4	1.1	77.3	22.7	54.1	45.9
Norway	1953-1958	4.1	4.5	3.6	49.0	51.0	44.0	56.0
	1958-1964	1.6	3.1	0.3	91.2	8.8	50.0	50.0
Sweden	1953-1958	2.3	2.5	2.0	69.7	30.3	65.3	34.7
	1958-1964	3.6	3.9	2.9	72.4	27.6	66.9	33.1
United Kingdom	1953-1958	3.1	2.8	3.4	41.9	58.1	46.4	53.6
	1958-1964	1.5	1.7	1.2	61.1	38.9	51.9	48.1
United States	1953-1958	2.9	2.5	3.7	58.9	41.1	67.5	32.5
	1958-1964	1.3	1.9	0.5	86.6	13.4	63.3	36.7

Sources and methods: See Table 2.2.

The importance of the relative rise in construction costs in 1958-1964 was most marked in Belgium, Denmark, western Germany, Italy, the Netherlands and Norway. (In western Germany, it accounted for over a quarter of the total increase in domestic expenditure prices.) It was not important in France or the United Kingdom. These increases in relative prices may be explained by the slow growth of productivity in an industry where the labour content is high, and must be qualified by the difficulties of estimation; another reason, however, may be that the construction industry is among those least exposed to competition from international trade.

2.2. THE CHANGING COST-STRUCTURE OF OUTPUT

Imports

Total resources, destined to be exported or sold on the home market, can be produced with domestic factors or imported. Chart 2.2 compares the price indices for imported goods and services with those for domestic output and shows the impact of imports on the overall level of prices (prices for total resources). It also shows the changes (in volume) in the import content and the domestic content per unit of total resources.

The changes in "domestic output prices" are derived by dividing the published estimates of gross domestic product at current market prices by the estimates at constant prices. These estimates are made in different ways in different countries. In principle, they should yield changes in final selling prices, excluding the effects of changes in the prices of imported inputs. In effect, changes in the domestic output prices thus equal changes in factor costs (or factor incomes) plus net indirect taxes per unit of output.

Over the whole 1953-1964 period, import prices have shown a tendency to rise distinctly more slowly than domestic prices. In some countries — Belgium, western Germany, Italy, the Netherlands and Norway — import prices have not increased at all. For this, there are several reasons. World prices for primary products have on balance been falling or stable over the period as a whole. Secondly, prices of imported manufactures tend to rise less than the average price of total output of goods and services in the importing country. Thirdly, imports are absorbed by the most competitive users who are accustomed to switch between different sources of supply according to price and quality. The price indices shown here are current weighted and must thus reflect a certain shift towards items with the smallest increases. Only in France, because of devaluation, were import prices substantially higher (nearly 30 per cent) in 1964 than in 1953. Comparing import and export prices (for all goods and services) it appears that the terms of trade moved in favour of most countries over the whole period 1953-1964: by between 5 and 15 per cent in Austria, France, western Germany, Italy, the Netherlands and the United Kingdom. They did not improve in Belgium, Norway and Sweden.

In nearly all countries import prices were very stable in 1953 to 1955 or 1956 but rose to a peak in 1957. Their drop in 1958, the recession year, is common to all countries except France. In most countries, import prices, after the recession, exhibited a cyclical behaviour rather similar to that in the earlier cycle: stability or even decline, in the early years, followed by a new expansion. The different rates, and timing, of the changes in import prices in the various countries reflect differences in the composition of imports, by commodity and source. Fluctuations in prices of primary products account for much of the cyclical fluctuations. Changes in prices for imported manufactures reflect in part the varying rates of inflation in other industrial exporting countries (largely other western European countries). However, in most countries, import prices in 1964 were less — in some much less — than the previous peak of 1957.

Meanwhile, prices of domestic output have risen considerably faster. Over the whole period 1953 to 1964 the increase was between 22 per cent (in Belgium) and 66 per cent (in France). For Austria, western Germany, Italy, Norway, Sweden and the United Kingdom, the rise ranged from 34 to 44 per cent, and in the Netherlands it was 50 per cent. If attention is turned to the cyclical behaviour of output prices in the two booms, one feature appears common to a number of countries: price rises tended to accelerate in the course of each upturn; even in the recession year, 1958 or 1959, output prices continued to increase in all countries. In several countries, the rise of output prices began to exceed, at some point in 1958-1964, the rates experienced previously: in Austria and in western Germany in 1961, in Italy in 1962, in France in 1963 and in Belgium and the Netherlands in 1964. By contrast, in Norway, Sweden and the United Kingdom the rates of price increase did not exceed those experienced earlier. The relative stability of domestic output prices in the United States since 1958, compared with earlier years, contrasts remarkably with trends in western Europe.

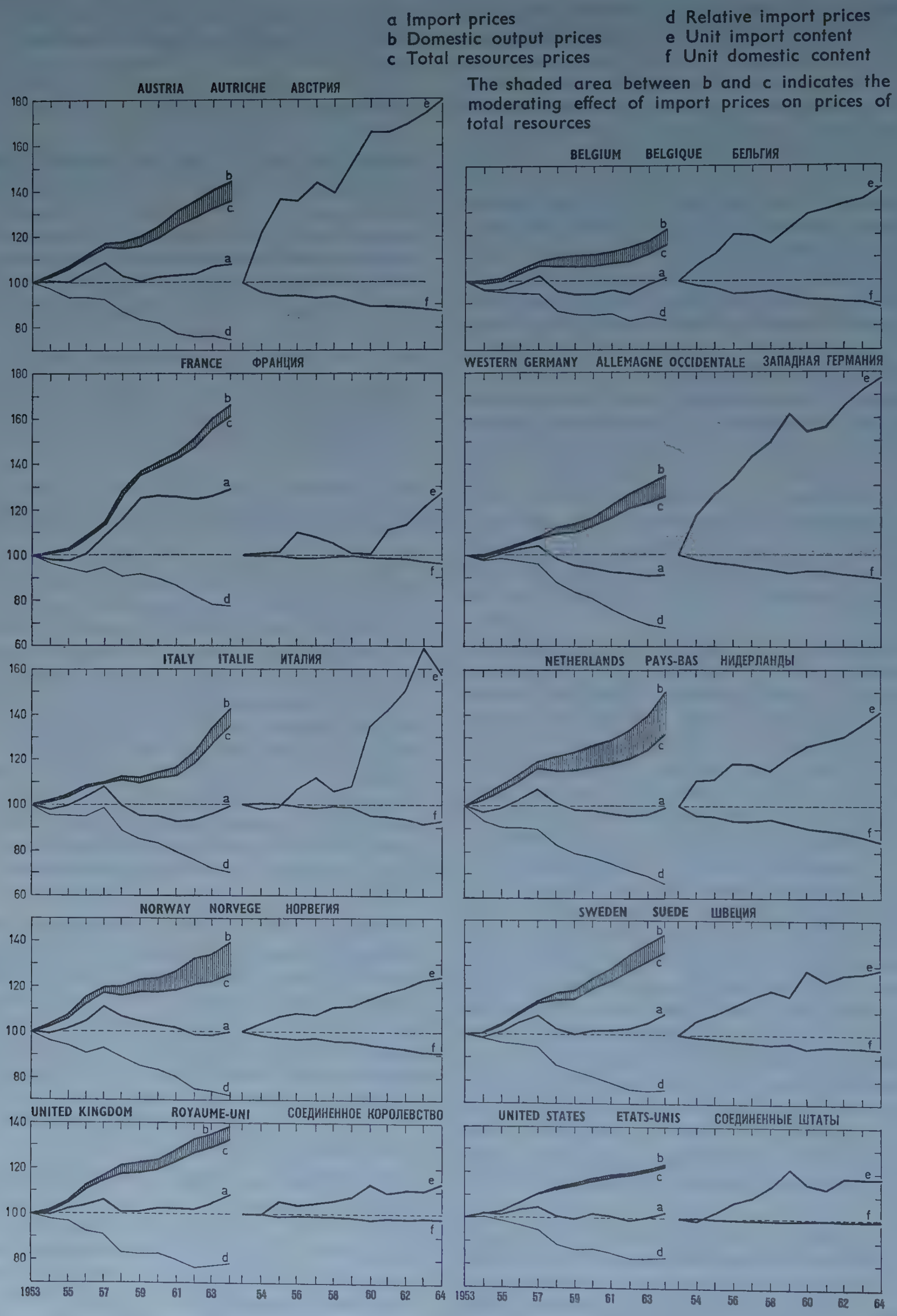
Thus the ratio of import to domestic prices has been declining almost continuously in all countries. At the same time, the share of imports in total resources, at constant prices, has everywhere increased greatly (see the second part of Chart 2.2). It is these two factors together, taken in conjunction with the proportion of imports in total resources, which account for the general moderating influence of imports on overall price levels. The effects of these three factors are summarized, for the whole period 1953-1964, in Table 2.5.

The moderating impact of imports on prices was obviously greatest — as the last columns of Table 2.5 show — where the proportion of imports to total resources was highest, in the Netherlands and Norway. It was least in France (and in the United States) where the import proportion was low. It can also be seen that differences in the decline of relative import prices were not very great — between 34 per cent in the Netherlands and 18 per cent in Belgium. But differences in the extent to which the import share in total resources increased

CHART 2.2

Import prices and domestic output prices, and content per unit of final resources

Indices, 1953 = 100



Sources: United Nations, *Yearbook of National Accounts Statistics;* and national statistics.

NOTE. — The price indices are implied prices in national accounts, obtained by dividing series at current prices by series at constant prices. Imports refer to goods and services. Domestic output refers to gross domestic product at market prices.

Total resources cover gross domestic product plus imports of goods and services The indices of relative import prices have been obtained by relating the indices of import prices to the indices of domestic output prices. The indices of the import content and of the domestic content per unit of total resources have been obtained by relating, respectively, the volume index of imports of goods and services and the volume index of gross domestic product with the volume index of total resources.

TABLE 2.5

The impact of import prices and unit import content on the overall level of prices

Indices for 1964, 1953 = 100

Country	Import prices		Domestic output prices		Final resources prices		Relative import prices		Unit import content		Import share in total resources in 1964 (per cent)	Impact of imports on final resources prices		
	Index	Rank [a]	Index	Rank [a]	Index	Rank [a]	Index	Rank [a]	Index	Rank [b]		Total (3)—(2)	due to changes in	
													Import prices	Volume of imports
	(1)		(2)		(3)		(4)=(1):(2)		(5)			(6)	(7)	(8)
Austria	108.1	7	144.4	8	135.6	8	74.9	5	179.5	1	20	— 8.9	— 5.2	— 3.7
Belgium	100.9	5	122.4	1	115.7	1	82.4	9	142.5	4	27	— 6.7	— 4.8	— 1.9
France	129.2	10	166.4	10	161.1	10	77.6	7	127.5	7	12	— 5.3	— 4.5	— 0.8
Western Germany	91.2	1	134.4	3	125.5	3	67.8	2	177.6	2	15	— 8.9	— 5.1	— 3.8
Italy	99.4	3	142.1	6	134.9	7	70.0	3	157.3	3	14	— 7.2	— 5.3	— 2.1
Netherlands	99.3	2	150.0	9	131.1	5	66.2	1	141.1	5	33	— 18.9	— 15.6	— 3.3
Norway	99.9	4	138.9	5	125.6	4	71.9	4	124.0	8	29	— 13.3	— 11.6	— 1.7
Sweden	108.9	9	143.5	7	135.8	9	75.9	6	128.4	6	21	— 7.7	— 7.0	— 0.7
United Kingdom	108.2	8	138.0	4	132.3	6	78.4	8	113.2	10	17	— 5.7	— 5.5	— 0.2
United States	102.5	6	123.4	2	122.5	2	83.0	10	117.8	9	4	— 0.9	— 0.9	0.0

Sources: As for Chart 2.2.

NOTE. — Total impact of imports on final resources prices is the difference between (3) and (2); the separate impact of changes in prices and changes in volumes have been calculated according to the following formula:

$$P_R - P_D = W_e\ (P_I - P_D) + (W_t - W_e)\ (P_I - P_D)$$

where: P_D = price index of domestic output

P_R = price index of final resources

P_I = price index of imports, and W_e and W_t the import content at constant prices in 1953 and 1964 respectively.

[a] Largest fall or smallest increase ranked as 1.

[b] Largest increase ranked as 1.

TABLE 2.6

Components of imports and import prices

Country	Indices of import prices (unit value) in 1964 *1953=100*			Share of services in total imports of goods and services *Percentage*		Share of manufactured goods in imports of goods *Percentage*	
	Total goods and services	Goods	*of which:* Manufactured goods	1953	1964	1953	1964
Austria	108	86	..	5.1	13.5	38.5	66.3
Belgium	101	95	101 [a]	17.7	18.6	47.1	60.5
Denmark	99	96	102 [b]	17.9	14.9	54.5	65.1
Finland [c]	143	143	161	9.5	11.4	46.7	45.6
France	129	135	114	..	..	23.4	49.5
Western Germany	91	88	89 [d]	15.2	22.8	24.0	45.7
Ireland	112	111	114	6.9	7.9	46.9	59.7
Italy	99	87	89 [a]	16.6	21.4	31.8	45.0
Netherlands	99	99	..	20.2	19.0	47.5	60.9
Norway	100	98	99 [be]	29.4	26.5	67.0	70.3
Sweden	109	106	109 [f]	10.5	9.0	56.6	86.1
Switzerland	102	106 [g]	..	9.2	9.7	51.4	69.3
United Kingdom	108	103	100	23.7	25.5	19.2	36.5
United States	102	100	..	29.0	28.7	35.0	48.8

Sources: United Nations, *Yearbook of National Accounts Statistics*, 1965; OECD, *Foreign Trade*, Series II, 1953, No. 4, and *Commodity Trade, Series C*, January-December 1964; national statistics.

NOTE. — Figures for goods are taken from trade statistics and (except for the United States) refer to imports *c.i.f.* They therefore include insurance and freight, which are treated as services in national accounts.

[a] "More elaborate goods".

[b] 1955=100 (corresponding index for goods = 98).

[c] 1954=100 for index numbers and year 1954 for shares.

[d] Finished goods.

[e] Excluding ships.

[f] 1956=100 (corresponding index for goods = 103).

[g] 1960=100 (corresponding index for total goods and services = 106).

were much greater — from 80 per cent in Austria to 13 per cent in the United Kingdom. The rise in the import share appears more important than the change in relative import prices in determining the impact on prices. It is worth noting that in the general recession (around 1958) the rise in the import share slowed down in most countries, reflecting the fact that the marginal import content tends to be greater than the average.

The significance of the rising share of imports in total resources at constant prices (or the "unit import content"), and of the fall in relative import prices, could be fully assessed only by a detailed analysis. All that can be done here is to separate imports of goods from imports of services, and, among goods, manufactures from primary products; some indication can also be given of the price changes in each of these broad categories. The figures, for the whole period 1953-1964, are summarized in Table 2.6.

It is clear that the bulk of the increase in unit import content was the result of increasing imports of manufactures — where competition between imports and domestic production, aided by more liberal commercial policies, was the main factor at work. At the same time, it was in primary products that import prices fell most, or increased least. In addition, the share of services in total imports increased in some countries (notably in Austria, western Germany and Italy); some services, such as shipping or travel, are open to competitive influences, like manufactured goods. Prices of "imported" services also tended to increase more than those of goods (though not, exceptionally, in France).

Cost components of domestic output and their impact on prices

We turn now to examine changes in domestic output prices in terms of costs. From national accounts statistics, "costs" can be divided into the following categories: income from employment, income from self-employment,[8] income from property, depreciation and indirect taxes (net of subsidies). Income from employment covers total employment income (wage- and salary-earners), including employers' contributions to social security. Income from self-employment is before tax but after depreciation. Income from property covers three categories: household property incomes (dividends, interest and rent), savings and direct taxes of corporations, and government income from property and entrepreneurship.

This division of incomes other than employment income is not the most appropriate for the present purpose. But it is all that can be given on a comparative basis and follows the presentation of the international standard system of national accounts. The problem of dividing the income of the self-employed between labour income and return on capital is one that cannot be surmounted except by arbitrary devices (one of which is used below). But the existing arrangement of other forms of profit and property income makes it impossible to extract one of the crucial figures needed for an adequate analysis of the distribution of income between factors of production — namely the profits of corporate enterprises.[9] Moreover, several western European countries — some of them to be regarded in other respects as statistically advanced — do not even distinguish in their statistics between self-employment income, savings and taxes of corporations, and household property income.

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[8] For brevity, the term "income from self-employment" is used for profits of unincorporated enterprises, independent entrepreneurs, persons working on own account, etc.

Table 2.7 shows the percentage contribution of changes in each of the various cost components to the total price rise of domestic output, in 1953-1958 and 1958-1964. These percentage contributions can be compared with the percentage weight of each component in total gross domestic output, which is given in Table 2.8 for 1953 and 1964.

Increases in employment income naturally account for the greater part of the price increases — from about 50 per cent (taking both periods together) in Austria, Denmark, Finland and Switzerland to about 70 per cent in Belgium, the Netherlands, Sweden and the United Kingdom. The significance of these figures depends, however, on the weight of employment income in domestic output. In every country, in both periods shown, the percentage contribution of employment income was greater than its weight — with the two exceptions of Finland and Switzerland in 1953-1958. Moreover, in eight countries out of thirteen, the contribution of employment income was greater in 1958-1964 than in 1953-1958 — substantially greater in Finland, Italy, Sweden and Switzerland. But its contribution was less in the later period in Belgium, Denmark, western Germany, Norway and the United Kingdom.

In several countries, as the following figures show, a substantial share of the rise in employment income resulted from increases in employers' contributions to social security (excluding contributions to private superannuation schemes, voluntary insurance schemes, etc.). These increased more than proportionately to wages and salaries in all the countries shown below — mainly after 1958. In Austria, Belgium, Finland, France, the Netherlands and Norway, the increase in employers' contributions between 1953 and 1964 amounted to as much as 4 per cent of total employment income (see Table 2.8).[10]

Changes in income from employment, 1953-1958 and 1958-1964
Percentage increases

	Income from employment		*of which :* *Wages and salaries*		*Employers' contribution to social security*	
	1953-1958	*1958-1964*	*1953-1958*	*1958-1964*	*1953-1958*	*1958-1964*
Austria . .	65.3	67.4	61.3	68.1	86.5	64.2
Belgium . .	33.3	53.6	32.0	50.8	46.5	79.3
Finland . .	41.0[a]	95.4	40.5[a]	90.2	45.3[a]	143.7
France . .	70.2	89.4	72.3	83.9	61.7	113.7
Western Germany	65.7	76.3	63.0	78.2	90.6	62.1
Ireland . .	17.1	68.6	17.1	67.9	10.7	125.8
Netherlands	66.0	86.9	65.7	84.0	67.5	105.5
Norway . .	44.0	59.8	43.3	54.4	87.3	299.7
Switzerland	27.8	81.8	27.1	80.3	36.2	96.5
United Kingdom.	39.7	45.5	38.4	44.7	60.3	55.3

Sources : OECD, *Questionnaires on National Accounts ;* national statistics.
[a] 1954-1958.

If employers' contributions to social security are excluded from employment income, its contribution to the total price rise appears to have fallen somewhat between the two periods in France and the Netherlands, and to have fallen in Norway more than appears from the gross figures. Moreover, the differences between the shares in the total price rise, and the weights in total output, appear much less impressive in several countries.

In this respect, the attribution of costs is, it may be argued, somewhat arbitrary. A different method of financing social security — for example, a shift from employers' contributions to general taxation — would result in a smaller increase in "employment income" and, presumably, a larger increase in before-tax profits. It cannot be assumed, in fact, that the employers' contributions to social security are simply a substitute for direct wage and salary payments.

In the three countries where income from self-employment accounted for a sizeable share of the total price rise in the period 1953 to 1958 — Austria, France and Switzerland — the following period saw a decline in this share much sharper than can be explained by the fall in the weight of self-employment income in total domestic output. In Austria and Switzerland — for which separate data on farm incomes are available — farm incomes seem to carry most of the decline. By contrast, in Norway, Sweden and, even more, in Ireland (because of farm incomes), the contribution of income from self-employment to the total price rise increased after 1958. But in none of the countries for which data are available did the contribution of income from self-employment to total price rise in 1953-1958 (except in Switzerland) or in 1958-1964, exceed the weight of this item in total output.[11]

Total income from property contributed to price increases by more than its weight in output in four countries in 1953-1958 (Austria, Finland, Sweden and

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[9] The item "household income from dividends, interest and rent" includes much more than receipts from corporate enterprises, while a significant proportion of corporate payments of dividends, etc., does not go to resident households. It includes household receipts of interest on public debt. (Interest on public debt, received by all sectors, is subsequently deducted to arrive at gross domestic product.) "Depreciation", often stated in a single total, covers depreciation of all kinds of assets, including houses and public property; moreover, it is estimated (in principle, at replacement cost) in widely different ways in different countries. The generally more valid figure of gross corporate profits, before depreciation, is not to be found for several countries. Fortunately, the current revision of the international System of National Accounts, when it is applied in actual statistics, will provide a more useful division of non-wage incomes.

[10] The expansion of social security is described more fully in Chapter 6.

[11] The year-to-year changes in self-employment income are, however, somewhat erratic, especially where a large part consists of farm incomes and is subject to harvest variations.

TABLE 2.7

The impact on prices of changes in various cost components, 1953-1958 and 1958-1964

Country and period		Domestic output price rise[a]	Percentage contribution to price rise								
			Income from employment		Income from self-employment		Other incomes[b]			Depreciation	Indirect taxes *less* subsidies
			Total	*of which:* employers' contributions to social security	Total	*of which:* farm income	Total	*of which:* savings and taxes of corporations	*of which:* household property income		
Austria	1953-1958 . .	17.8	47.9	12.1	23.1	5.0	9.8	8.4	3.2	3.0	16.2
	1958-1964 . .	26.6	55.4	10.6	— 1.0	— 4.9	10.7	5.4	6.0	14.9	19.9
Belgium	1953-1958 . .	10.0	75.8	11.5	— 3.8	— 3.5	7.5	— 2.3	14.4	15.0	12.5
	1958-1964 . .	12.4	59.7	13.5	0.6	0.9	— 4.0	12.4	— 9.0	8.4	27.2
Denmark[c]	1953-1958 . .	14.5	52.9	0.3	. .	. .	9.4	— 6.3 —		15.1	24.0
	1958-1964 . .	34.7	52.1	. .	. .	. .	21.2	— 19.2 —		8.6	17.8
Finland	1953-1958 . .	29.8	41.2	4.5	9.7	6.5	20.6	0.7	16.1	17.7	10.6
	1958-1964 . .	32.5	62.6	11.9	10.2	6.9	10.4	— 2.1	11.5	10.9	4.8
France	1953-1958 . .	28.4	53.5	8.5	21.3	. .	8.5	6.6	3.5	3.7	12.8
	1958-1964 . .	38.0	59.6	16.0	6.8	. .	3.5	— 0.3	2.8	11.2	19.3
Western Germany[c]	1953-1958 . .	12.0	67.0	13.0	. .	. .	24.6	2.9	17.6	5.6	3.5
	1958-1964 . .	22.4	59.9	4.0	. .	. .	9.1	— 0.4	8.3	17.4	12.2
Ireland	1953-1958 . .	14.4	53.2	0.5	— 5.4	— 10.7	12.4	— 4.0	21.9	16.4	26.7
	1958-1964 . .	26.2	59.8	1.7	14.3	8.3	7.3	13.1	4.8	10.3	8.1
Italy[c]	1953-1958 . .	12.3	54.3	. .	. .	. .	18.0	. .	. .	8.8	19.9
	1958-1964 . .	29.8	71.3	. .	. .	. .	8.2	. .	. .	8.5	13.0
Netherlands[c]	1953-1958 . .	21.7	71.2	9.9	. .	. .	26.7	1.3	25.5	9.3	— 7.1
	1958-1964 . .	28.3	74.2	13.8	. .	. .	4.7	— 1.0	5.5	6.0	15.2
Norway[d]	1953-1958 . .	19.9	59.1	2.5	0.5	— 1.1	0.6	— 9.3	8.6	20.9	14.8
	1958-1964 . .	19.0	56.3	13.2	2.4	— 1.9	20.8	19.6	0.1	4.7	11.7
Sweden[e]	1953-1958 . .	18.1	62.9	. .	— 2.6	. .	27.5	14.7	10.6	. .	13.1
	1958-1964 . .	25.4	77.9	. .	1.3	. .	— 3.7	— 12.1	4.9	. .	25.0
Switzerland	1953-1958 . .	10.0	38.3	6.3	19.5	10.1	31.7	19.1	8.0	5.2	3.8
	1958-1964 . .	28.6	59.5	7.1	8.3	— 0.8	7.6	4.5	2.4	16.0	9.3
United Kingdom	1953-1958 . .	21.1	69.3	7.3	0.7	. .	11.4	1.5	8.4	9.0	10.6
	1958-1964 . .	16.9	59.5	6.5	— 1.0	. .	24.2	1.1	16.8	4.3	13.9

Sources: United Nations, *Yearbook of National Accounts Statistics;* and national statistics.

NOTE. — Percentage contributions do not always add to 100 because property income received from and remitted abroad is excluded from the first column but included in "other incomes" in the calculation of percentage contributions.

[a] At market prices; percentage increase on index 1953 = 100.

[b] The total covers all profits on property income, including general government property income but excluding interest on public debt. The item "savings and taxes of corporations" and "household property income", however, *includes* interest on public debt of which the breakdown by receiving sectors is not available.

[c] Income from self-employment is included in household property income.

[d] Income from self-employment covers only agriculture, forestry, fishing, liberal professions and personal services. Other sectors are included in "savings and taxes of corporations".

[e] Depreciation is included in "savings and taxes of corporations".

Switzerland), and in 1958-1964 in Austria, Norway and the United Kingdom. Over the period 1953-1964 as a whole, the countries fall into two groups: in one group the contribution of property income to price rises was roughly equal to its weight in output — Austria, Finland, France, Ireland, Switzerland and the United Kingdom; in all the other countries property income contributed much less than its weight, and thus exercised, in effect, a moderating influence on the overall price rise, most conspicuously so in Belgium (where property income contributed nothing to price increases).[12]

There is a difference, however, between the two main components of property income: "savings and taxes of corporations" and "household property income".[13]

The item which comes nearest to profits as normally understood is the "savings and taxes of corporations" (i.e. after depreciation and after distribution of dividends). In itself this item made significant contributions to price rises hardly anywhere in either period; where it was

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[12] Note, however, that in four countries in this group — Denmark, western Germany, Italy and the Netherlands — property income includes all income from self-employment, and the decline in property income reflects in part the structural decline in self-employment.

[13] Government income from property is not shown separately in Tables 2.7 and 2.8.

TABLE 2.8

The weights of cost components in total domestic output in 1953 and 1964

Gross domestic product at current market prices = 100

Country and period		Income from employment		Income from self-employment		Other incomes [b]			Depreciation	Indirect taxes *less* subsidies
		Total	*of which:* employers' contributions to social security	Total	*of which:* farm income	Total	*of which:* savings and taxes of corporations	*of which:* household property income		
Austria	1953 . . .	46.8	5.3	24.7	8.7	6.2	5.7	0.3	11.0	11.3
	1964 . . .	48.5	7.1	19.7	5.7	7.5	6.0	1.7	10.8	13.5
Belgium	1953 . . .	44.4	4.0	24.0	5.0	14.2	3.5	11.8	9.3	9.1
	1964 . . .	48.5	5.6	19.3	3.8	11.8	4.0	9.8	9.7	11.2
Denmark [c]	1953 . . .	46.1	0.3	..	..	37.2	— 37.2	—	6.8	9.6
	1964 . . .	48.2	..	..	..	30.8	— 30.0	—	8.0	12.9
Finland	1954 . . .	46.1	4.4	18.2	12.8	17.4	8.4	7.1	6.7	11.3
	1964 . . .	48.5	5.9	15.0	10.5	16.6	4.9	9.7	9.6	9.9
France	1953 . . .	42.4	8.4	23.0	..	8.6	4.5	4.7	9.8	15.7
	1964 . . .	48.3	10.0	19.3	..	7.8	4.0	4.2	9.1	15.7
Western Germany [c]	1953 . . .	44.8	4.4	..	..	31.5	5.1	25.3	9.1	14.7
	1964 . . .	49.3	5.1	..	..	26.9	4.0	21.6	10.1	13.4
Ireland	1953 . . .	45.3	0.6	28.0	21.8	13.2	4.7	7.8	4.4	12.8
	1964 . . .	48.8	0.8	22.0	16.0	12.0	5.4	8.7	6.7	13.3
Italy [c]	1953 . . .	39.4	..	..	..	40.3	..	..	9.4	11.1
	1964 . . .	47.3	..	..	..	31.7	..	..	9.2	12.2
Netherlands [c]	1953 . . .	43.3	5.8	..	..	37.0	9.4	28.4	10.1	11.3
	1964 . . .	53.2	7.9	..	..	29.4	6.3	23.6	9.2	9.4
Norway [d]	1953 . . .	47.0	0.8	10.2	7.9	21.8	20.2	1.7	11.8	9.0
	1964 . . .	50.0	2.7	7.7	5.3	18.6	15.9	2.4	12.1	10.2
Sweden [e]	1953 . . .	59.0	..	11.2	..	22.2	11.6	9.4	..	7.8
	1964 . . .	62.8	..	7.7	..	18.3	7.8	8.8	..	11.5
Switzerland	1953 . . .	53.3	4.4	16.9	5.6	16.8	6.0	9.5	8.6	5.8
	1964 . . .	53.5	5.1	15.3	4.6	16.0	6.6	8.0	9.9	6.4
United Kingdom	1953 . . .	58.0	3.5	8.4	..	15.1	11.0	7.5	7.8	12.0
	1964 . . .	59.9	4.5	6.1	..	15.7	8.3	8.8	7.5	12.0

Sources and Notes: See Table 2.7.

important in one period its effect was cancelled in the other — presumably a cyclical effect. Household property income reflects, among many other things, the changes in distributed corporate profits. Its weight is much smaller than that of corporate savings and taxes, and the pattern of change is generally not very different; but it shows on the whole a rather smoother movement.

The element of depreciation is difficult to interpret. Because of varying methods of calculation, it cannot be ignored as a potential contribution to cost increases and modifies the impression given by the trend of other non-wage incomes — corporate or non-corporate. There are some countries, such as western Germany, Ireland, Norway and Switzerland, where the contribution of depreciation to price rises rose out of proportion to its weight in one or both periods; in others, the contribution more or less kept in line with the weight.

In a number of countries, indirect taxes (less subsidies) made a significant contribution, over the whole period 1953 to 1964, to the increase in prices, most notably in Austria, Belgium, Denmark, Ireland, Italy, Norway and Sweden. In Belgium, western Germany, the Netherlands and Sweden the effect of indirect taxes on prices markedly increased after 1958.

Total labour costs and the allocation of self-employment income

The preceding analysis, based on the contribution to output prices of each cost component shown in national accounting statistics, fails to provide a satisfactory picture of the impact of labour costs separately from that of the costs of capital and entrepreneurship. The share of total output represented by income from self-employment — declining but still very important in several countries —

is a combination of rewards to labour, capital and entrepreneurship.[14] It is a common practice to establish measures of changes in labour productivity, or in labour costs per unit of output, by comparing changes in the numbers of wage- and salary-earners employed, or in their pay, with changes in total output. But such comparisons will mislead if there has been a significant change in the share of output represented by self-employers. Such changes have, in fact, been significant in several countries; in Austria, France, western Germany and Italy, the most striking examples, the proportions of self-employed declined over the period 1953-1964 by something like 10 per cent of the total employed labour force (Table 2.9). To ignore such changes, and to compare changes in total output merely with the numbers and pay of wage- and salary-earners, leads to an appreciable understatement of the increase in overall labour productivity and to an overstatement of the rise in overall labour costs per unit of output.[15]

There is no really satisfactory statistical solution to this problem, which vitiates any attempt to analyse with precision the changes in unit costs of labour and capital when the share of self-employment has changed substantially. However, various arbitrary solutions for breaking down self-employment income into a labour component and a capital or entrepreneurship component have been proposed by various writers : (*a*) The first method (which we have adopted here) is to attribute to self-employers a "wage" equal to the average for wage- and salary-earners (either in the economy as a whole, or sector by sector); the residue of self-employment income is treated as a return on their capital. (*b*) Alternatively, the reverse can be done: a return on capital can be attributed to self-employers (if an estimate of their capital can be made, which is not generally the case) equal to the average in corporate business, or according to some other assumption, and the residue treated as labour income. Both methods suffer from obvious defects. The self-employed include some people with the highest professional qualifications, and others — particularly farmers and shopkeepers, and members of their families — with much less than a full-time occupation and whose labour services should be valued at less than the average employment income. To attribute to self-employers an average return on capital may be to set the figure too high or too low. Whether (*a*) or (*b*) is used, there is a risk that the residue of income, which will bear all the fluctuations in the total self-employment income, will be absurdly irregular and absurdly too high or too low. (*c*) Self-employment income might be divided between labour and property income according to some constant proportions or according to the changing proportions in the corporate sector (implying an assumption of average capital intensity, which seems improbable). This would lead to an average return for the labour component (as for the capital component) which would fluctuate inconveniently in relation to average employment income.[16]

TABLE 2.9

Changes in the components of the estimated total labour costs in selected western European countries, 1953 to 1964

Country	1964 Index numbers, 1953 = 100			Percentage share of self-employed in the employed labour force		
	Total labour costs	Income from employment	Imputed labour returns of self-employed	1953	1958	1964
Austria	242.4	276.8	184.9	37.4	30.7	28.6
Belgium	194.5	204.6	160.0	25.4	23.6	20.7
France	280.7	321.3	205.4	35.1	30.1	25.7
Western Germany	291.3	310.6	228.2	28.4	24.6	20.1
Italy [a]	244.9	275.0	195.0	44.7	42.7	34.8
Netherlands	288.0	310.2	220.5	24.7	21.7	18.9
Norway	207.9	230.1	156.3	30.9	28.0	24.7
Sweden [a]	209.6	222.5	149.8	17.7	15.3	12.7
United Kingdom	201.8	203.2	183.2	7.2	7.1	6.7

Sources: United Nations, *Yearbook of National Accounts Statistics;* and national statistics. [a] Indices 1953-1963; shares in 1963 instead of 1964.

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[14] The shift from self-employment towards corporate enterprises occurs (a) through the shift away from sectors dominated by self-employment, particularly farming, (b) through the taking over of self-employment enterprises by corporate enterprises and (c) through the conversion, for fiscal or other reasons, of self-employment enterprises into corporate enterprises without, necessarily, any change in the business except in its legal form.

[15] The errors are less serious when industry alone is considered, since in most countries the proportion of the self-employed in industry has changed less than in the economy as a whole.

[16] For a general discussion of these problems, see Simon Kuznets, *Economic Development and Cultural Change*, Vol. VII, No. 3, Part II. See also Giuseppe De Meo, *Produttività e distribuzione del reddito in Italia nel periodo 1951-1963, Annali di Statistica*, Series VIII, Vol. 15, Chapter 2. All methods have been applied to the United States, for 1900-1957 (see Irving B. Kravis, "Relative income shares in fact and theory", *American Economic Review*, December 1959).

From these possibilities, we have chosen the first, attributing to self-employers, the average wage/salary. For five countries (Belgium, western Germany, Italy, Norway and the United Kingdom) it has been possible to impute the labour remuneration of self-employed on the basis of the average earnings of dependent labour in each of four sectors (agriculture, manufacturing, construction and the residual), which has yielded a "weighted" average for the total economy (see below, page 23). For another four countries (Austria, France, the Netherlands and Sweden), for which data for a sector analysis were not available, we have applied the less satisfactory method of attributing to self-employers the (unweighted) average wage/salary in the whole economy. The error involved in such a solution depends not only on the problems just discussed but also, for example, on the degree to which, in different countries, self-employers are concentrated by sectors, on the divergence between wage and salary levels in different sectors and on the different degrees of under-employment.[17] Moreover, it must be pointed out that the estimates of the numbers of self-employed are themselves rarely accurate (especially for years between censuses of population), being often based on sample surveys or extrapolations.

Nevertheless, comparison of this crude estimate of the imputed labour return of self-employed with a much more detailed one made for Italy — where the share of self-employed in the total labour force is particularly large and where the shift towards dependent jobs has recently been massive — shows, on the whole, an acceptable concordance.[18]

Italy — Comparison between two estimates of total labour costs, 1953-1963

Indices 1953 = 100

Year	Total labour costs		of which : imputed labour income of self-employed	
	A	B	A	B
1953 . . .	100	100	100	100
1954 . . .	108	108	107	107
1955 . . .	116	117	113	115
1956 . . .	126	127	123	123
1957 . . .	135	135	132	130
1958 . . .	145	145	142	138
1959 . . .	155	154	153	148
1960 . . .	166	164	154	149
1961 . . .	180	176	161	154
1962 . . .	207	200	175	166
1963 . . .	245	237	195	184

A De Meo, *op. cit.*, page 223. Estimate made by attributing to self-employers the average wage/salary in each sector.

B Estimate (by the Secretariat) made by attributing to self-employers the average wage/salary for the total economy.

Table 2.9 gives an estimate of total labour cost, including the imputed labour cost component of self-employment income computed by the methods described.

Absence of the necessary data prevents these methods from being applied to more countries. The table provides at least a rough guide to the extent by which the increase in labour costs may be overstated when the declining share of self-employment is ignored.

Total factor costs

If these estimates of total labour costs, including the imputed labour costs in self-employment, are accepted, it becomes possible to distinguish the contribution of labour income, the contribution of income from capital and the contribution of indirect taxes net of subsidies, from the overall rise in costs and prices per unit of output. The share of income from capital represents all factor incomes other than labour costs on the extended definition of labour costs used here. The resulting estimates, for each country for which an estimate can be made, are summarized in Table 2.10 and are related to the volume of output and to the inputs of labour and capital. The input of labour is simply the number of persons employed (including the self-employed) and labour incomes per unit of input of labour are simply average earnings (including employers' contributions to social security). The input of capital is based on very rough estimates of changes in the stock of physical capital, which are described below.

Over the period 1953-1964 as a whole, labour costs per unit of output have risen more than unit capital costs, and therefore more than output prices (since the indirect tax component plays a minor part) in Belgium, Italy, the Netherlands, and the United Kingdom. The same applies to Sweden, where, however, the rise in indirect taxes was important. In these four countries, factor shares thus appear to have shifted in favour of labour over the whole period. Austria shows the opposite pattern: a certain shift in factor shares away from labour. In France, western Germany and Norway, the increases in unit labour costs and in unit capital costs appear (taking into account the uncertainty of the exact figures) to have been on balance about the same.

Labour costs

A year-by-year analysis of the factors behind the *labour cost* component is shown in Chart 2.3, which displays the changes in average labour earnings ("labour income per unit of input"), in labour productivity,[19] and in the resultant total labour costs per unit of output. The chart illustrates two points. First, there is a clear and familiar cyclical influence in the increases in productivity — which rises fastest in the years of fastest increases in total output. Of course, since labour inputs include the self-employed, changes in labour productivity tend to be influenced by shifts of workers from self-employment to dependent jobs and from sectors where labour is under-employed to sectors where the labour force is more fully utilized. This is particularly important in countries

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[17] The method might be further refined, if information were available, by allowing for the relative degree of under-employment in self-employment in certain sectors.

[18] Although the absolute figure for imputed labour income in the secretariat estimate is in fact much higher than De Meo's.

[19] The employment figures take no account of changes in hours of work, holidays, etc. The average earnings and productivity therefore represent in principle *annual* earnings and productivity.

CHART 2.3

Output, prices, costs, incomes and productivity in the whole economy

Percentage changes over previous year
(The shaded area in each chart indicates the average annual percentage change over the whole period)

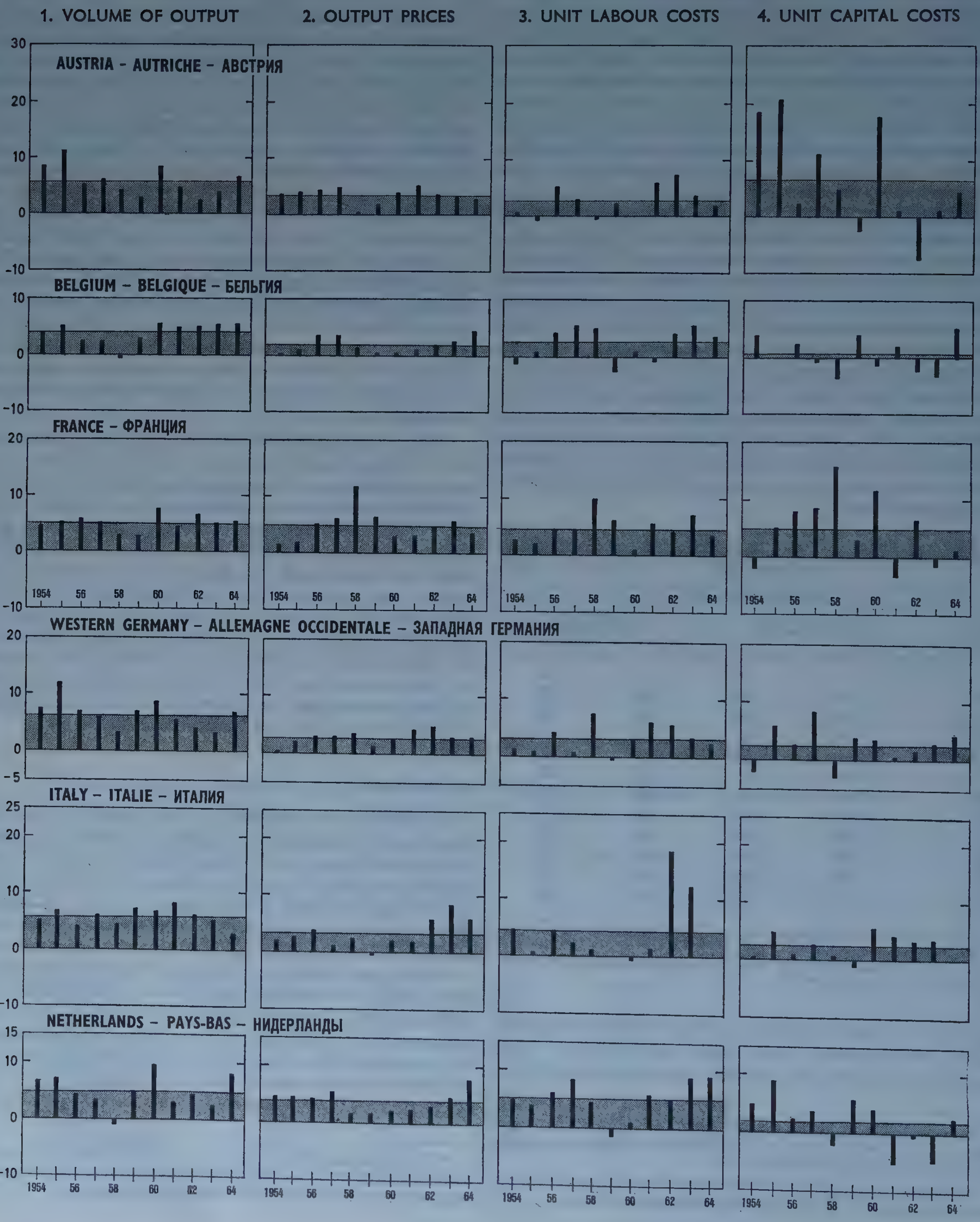


CHART 2.3 *(continued)*

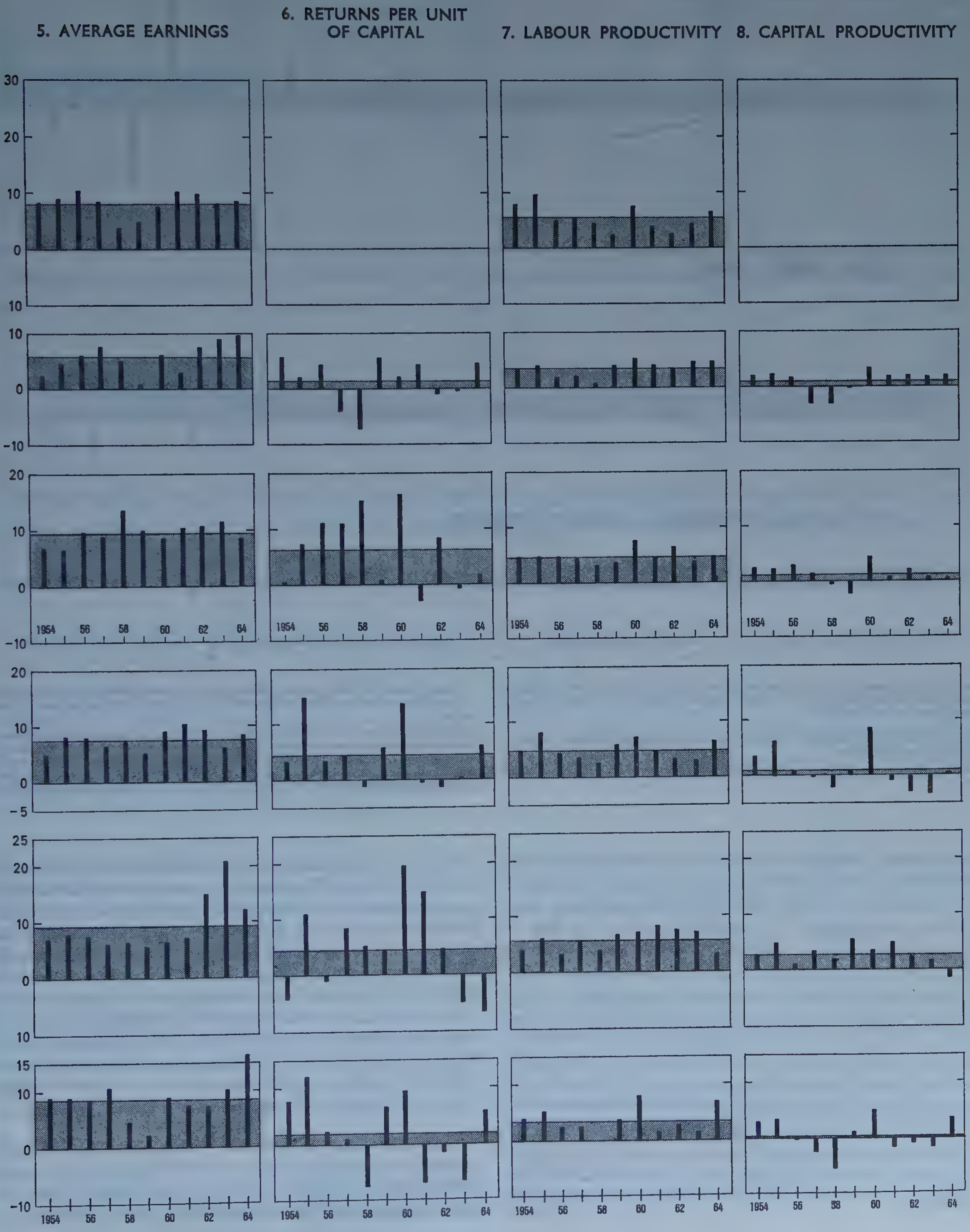
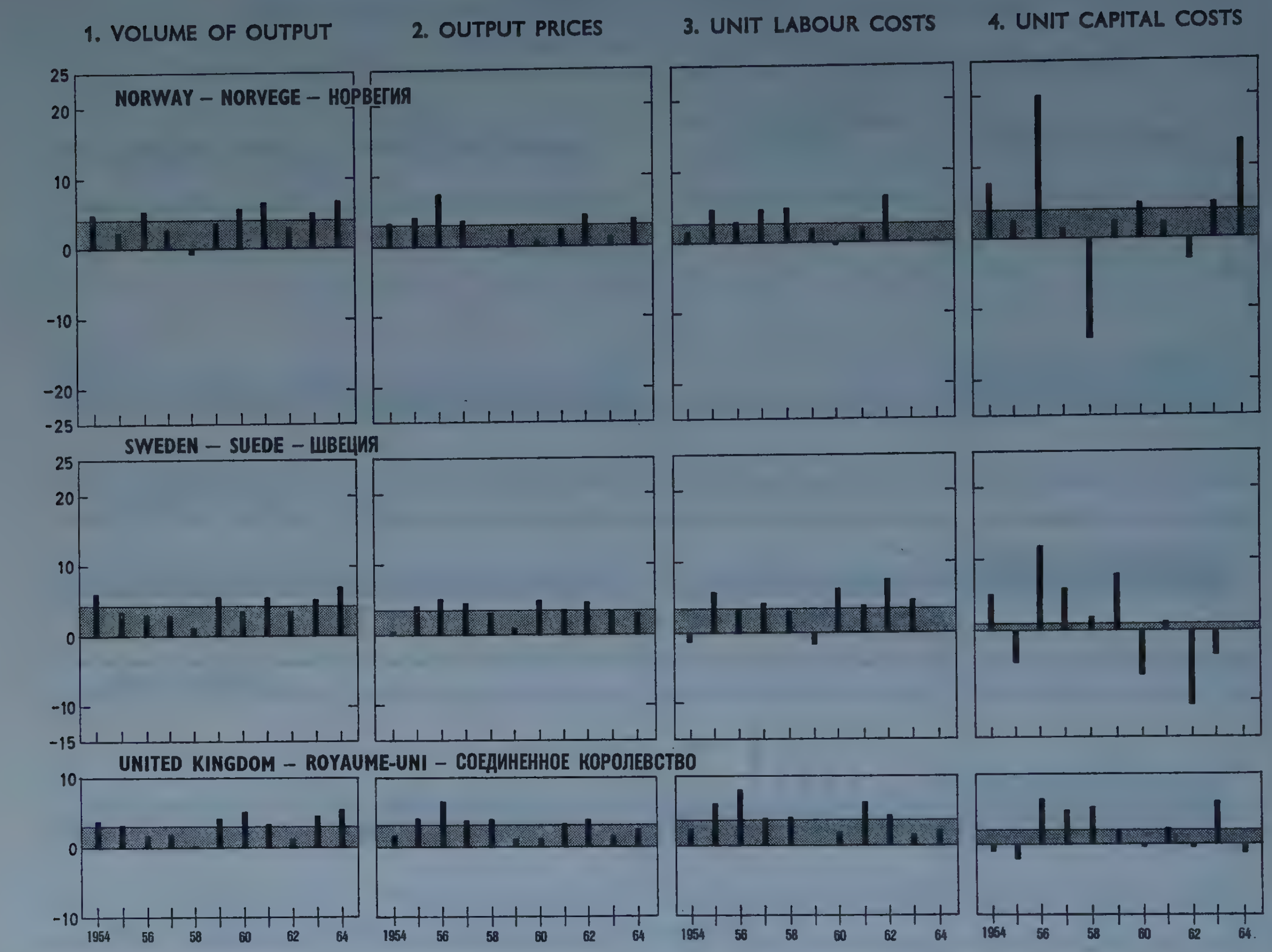


CHART 2.3 *(continued)*



Sources: For employment and capital stock see Table 2.11. For output, compensation of employees and related data, United Nations, *Yearbook of National Accounts Statistics* and national statistics.

NOTE. — Annual changes are derived from the corresponding index numbers, which are described below.

Volume of output — The series refer to gross domestic product at constant market prices.

Output prices — The implied price indices of gross domestic product at market prices, obtained by dividing the indices at current prices by the indices at constant prices.

Unit labour costs — Labour costs per unit of output, obtained by relating the indices of total labour costs to the volume indices of output. The total labour costs have been obtained by adding to total compensation of employees (including employers' contributions to social security), taken from national accounts statistics, the imputed labour remuneration of the self-employed. For the five countries for which an analysis

where labour statistics cover, under the item of self-employment, a large number of family helpers or marginal entrepreneurs — workers who derive their income from part-time occupations.[20] A pattern similar to that of labour productivity is shown by increases in average labour earnings, but rises in average labour earnings in periods of expanding output appear somewhat later and are less marked. Consequently unit labour costs tend to rise least (or not rise at all) when output increases fastest. Second, there was a clear tendency — almost general — for the rise in unit labour costs to accelerate in 1961 or 1962. This derived from the burst of increases in average labour earnings, unaccompanied by much change in the rate of increase in productivity. In Belgium and Italy the rise in unit labour costs continued unabated in 1963 and 1964, while it gradually moderated its pace in Austria western Germany, Norway and the United Kingdom.

The difference between the 1950s and 1960s is striking when the experience of the United Kingdom is compared with that of western Germany and Italy. Until 1960 unit labour costs had risen much more in the United

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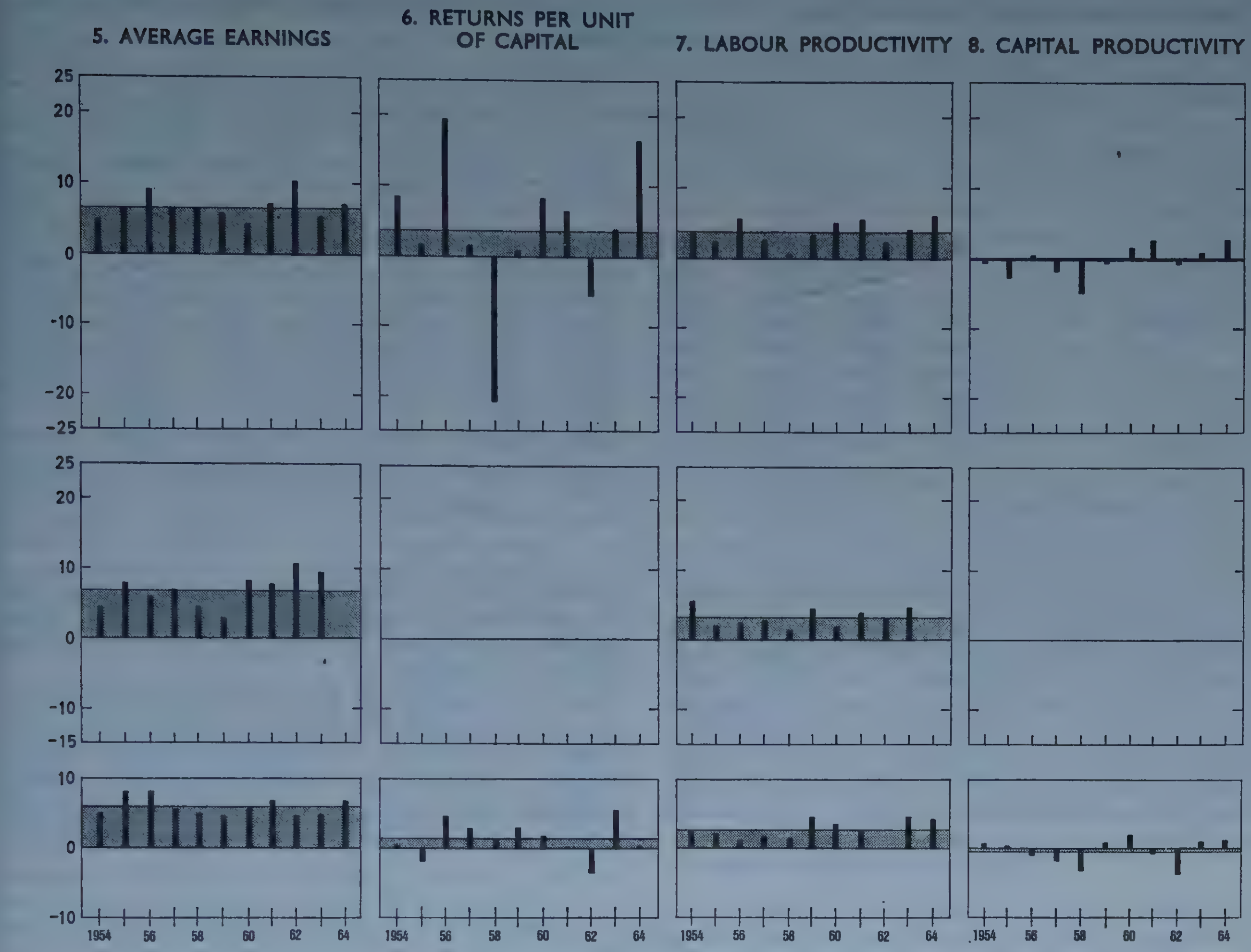
[20] The importance of taking into account changes in the numbers of self-employed, when estimating productivity trends, is particularly evident in Italy. There, the total numbers in work, including the self-employed, fell by about 1 million between 1961 and 1964. This partly reflects, however, the outflow of workers from rural areas. With the move into the towns, many people, especially women, who had previously been statistically included in the economically active population, but were in reality substantially under-employed, passed into the "non-active" category. With the increase in stable and better-paid jobs in industry, too, many people left precarious and marginal occupations in other sectors. The shift from "self-employment" to employee status has itself greatly increased average productivity.

CHART 2.3 *(continued)*



by sector has been possible (see Chart. 2.4), data are weighted averages for the four sectors covered (see details on p. 23 and Note to Chart. 2.4).

Unit capital costs — Capital costs per unit of output, obtained by relating the indices of total capital costs to the volume indices of output. The total capital costs have been derived by deducting the total labour costs (see above) from the total gross domestic product at factor costs.

Average earnings — Average remuneration per person employed, obtained by dividing the total compensation of employees (including employers' contributions to social security) by the number of wage- and salary-earners.

Returns per unit of capital — Capital returns per unit of capital input, estimated by dividing the indices of total capital costs (obtained as residuals as indicated above) by the indices of real capital stock.

Labour productivity — Output per head employed, obtained by relating the indices of the employed labour force to the volume indices of output.

Capital productivity — Output per unit of capital input, obtained by relating the indices of real capital stock to the volume indices of output.

Kingdom than in either western Germany or Italy (because of the slower rise in productivity in the United Kingdom against a rise in average earnings of the same order of magnitude). From 1960 to 1964 productivity still rose much less in the United Kingdom than in western Germany or Italy, but in these two countries the rate of increase in average earnings (especially in Italy) greatly accelerated. Consequently the rise in unit labour costs in the United Kingdom between 1960 to 1964 were somewhat less than in western Germany and much less than in Italy.

Capital costs

Annual fluctuations in capital costs (or in the return on capital if it is preferred to look at it from the point of view of income)[21] are shown in Chart 2.3, where they are compared with changes in unit labour costs and in the overall price level of domestic output.

The general trend in the relation between unit capital costs and unit labour costs has already been described. What emerges from Chart 2.3 is the much wider fluctuations in unit capital costs (or returns) than in prices, and the rather wider fluctuations in unit capital costs than

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[21] Capital costs, or returns, include the income components described on page 13 above (depreciation, house hold income from property, corporate savings and taxes, trading surpluses of public enterprises) *plus*, on our present extended definition, the balance of self-employment incomes after the imputed labour content has been deducted. The latter element, as pointed out above, may oscillate rather violently and even becomes negative in one or two countries in particular years.

TABLE 2.10

Changes in output and unit costs for various cost-components in selected western European countries, 1953 to 1964

Index for 1964, 1953=100

Country	Domestic output[a]		Cost per unit of output			Income per unit of input		Inputs		Productivity	
	Volume	Prices	Labour	Capital	Indirect taxes (net)	Labour earnings	Gross capital return	Labour	Capital	Labour	Capital
Austria	184.7	144.4	131.2	192.2	172.2	233.5	..	103.9	..	177.8	..
Belgium	151.8	122.4	128.1	107.2	152.1	180.5	115.3	106.6	139	142.4	109.2
France	170.8	166.4	164.3	165.7	176.7	272.1	188.7	103.2	150	165.6	113.9
Western Germany	209.6	134.4	139.0	131.2	122.9	220.9	157.9	126.1	194	166.3	108.1
Italy	183.8	142.1	149.8	128.2	156.6	264.0	159.0	101.1	139	181.8	132.2
Netherlands	168.4	150.0	171.1	120.4	124.5	243.9	121.4	118.1	167	142.6	100.8
Norway	155.7	138.9	133.5	147.1	157.6	203.9	140.3	103.6	157	150.3	99.2
Sweden	159.0	143.5	141.9	123.1	211.9	206.7	..	109.1	..	145.6	..
United Kingdom	139.5	138.0	144.7	121.1	141.1	188.2	114.5	107.4	147	129.9	94.9

Sources: See Charts 2.2, 2.3 and 2.4.

[a] At market prices.

in unit labour costs. Average labour earnings increase at a relatively smooth rate. Short-term output fluctuations are reflected largely in wide fluctuations in the rate of productivity increases and therefore in unit labour costs, which rise most when output rises least. Since the rate of price increase is also relatively smooth the result is large fluctuations in unit capital costs, which carry the biggest part of the effects of the fluctuations in output. Unit capital costs then rise most — in opposition to unit labour costs — when output is rising fastest.

These cyclical oscillations in unit capital costs were very substantial in Austria, France, Norway and Sweden. They were less marked in Italy, western Germany and the United Kingdom.

One other measure of the return on capital is very tentatively suggested (illustrated in Chart 2.3 and summarized in Table 2.10). An effort has been made to relate the changes in total capital costs or returns (still including the residual income of the self-employed) to such estimates as can be compiled of the total stock of capital at constant

TABLE 2.11

Indices of real fixed capital stock (C) and of employment (E) in selected western European countries, 1954 to 1964

1953 = 100

C = Real fixed capital stock at the beginning of the year
E = Employed labour force, i.e. wage- and salary-earners and self-employment

Year	Belgium		France		Western Germany		Italy		Netherlands		Norway		United Kingdom	
	C	E	C	E	C	E	C	E	C	E	C	E	C	E
1954	102	101	102	100	104	103	102	101	104	103	105	101	103	102
1955	105	102	105	101	110	107	104	101	108	105	110	101	106	103
1956	108	103	108	102	117	109	107	102	113	107	115	101	109	104
1957	112	103	112	102	124	112	110	103	120	108	120	101	113	104
1958	115	102	116	102	131	113	113	103	126	107	125	100	117	103
1959	118	101	122	101	139	114	115	104	131	109	130	100	121	103
1960	121	102	126	101	148	123	119	104	137	111	135	101	125	104
1961	125	103	131	101	158	124	123	104	144	113	140	102	130	105
1962	129	104	137	101	170	125	128	103	152	115	145	102	136	106
1963	134	105	143	102	182	126	133	101	159	116	151	103	141	106
1964	139	107	150	103	194	126	139	101	167	118	157	104	147	107

Sources and methods: Except for Italy and Norway, capital stock figures as published in *Income and Wealth, Series VIII. The Measurement of National Wealth,* London 1959, have been extrapolated by using net investments at constant prices (i.e. gross domestic fixed capital formation less provisions for capital consumption) from the following sources: United Nations, *Yearbook of National Accounts Statistics,* and OECD, *Statistics of National Accounts,* 1950-1961 and 1955-1964. For Italy yearly data on capital stock have been taken from De Meo, *op. cit.*, and for Norway from *Statistisk Arbok*. Employment data have been taken from OECD, *Statistical Bulletins, Manpower Statistics,* and from national statistics.

replacement cost (shown in Table 2.11). The difficulties of estimating in a meaningful way changes in the capital stock are notorious,[22] and the resulting estimates of return per unit are put forward only with hesitation as an illustration of the wide differences between countries.

Over the whole period 1953-1964, if the figures are at all comparable, the biggest increase in capital stock was in western Germany, where it almost doubled, followed by the Netherlands where it rose by two-thirds. Elsewhere the increases were between 40 and 50 per cent (rather over 50 per cent in Norway); the pattern of relative increases was much the same throughout the period. When the increase in capital costs shown by the national accounts is related to the changes in capital stock, marked differences appear in the rates of return (shown in Table 2.10 and Chart 2.3 as "gross capital returns"). Thus in France the rate of return per unit of capital stocks increased most — by about 90 per cent. In Italy, the increase was almost as great up to 1962 (the rates of return on capital rose very rapidly during the "miracle years" of 1958-1961), but was heavily reduced in 1962-1964 by the "wage explosion" and subsequent deflation. In Belgium, the Netherlands and the United Kingdom, the rate of return rose by only 15-20 per cent. In these last three countries, indeed, it appears that the increase in return per unit of capital was distinctly less than the rise in price of domestic output. In this sense there was a definite fall in the "real" rate of return per unit of capital stock. In Norway, the rate of return about kept pace with the rise in prices. In France, western Germany, and Italy, the real rate of return appears to have risen markedly. These differences appear to be roughly associated with differences between countries in the rates of growth of output: the real rate of return rose where output grew faster than average and fell where output growth was slower; the exception was the Netherlands with a falling real rate of return and output growth above average.

Cyclical oscillations in the rate of return on capital are naturally very large, and vary considerably as between countries. These oscillations are particularly marked in Belgium, the Netherlands and Norway, and may well reflect the greater sensitivity of profits in these countries to fluctuations in foreign trade. In France, western Germany, Italy and the United Kingdom the oscillations are much less violent.

The longer-term changes in rates of return are connected with the relative changes in the capital stock and changes in the rate of growth of output. This relationship is shown by the last column of Table 2.10 ("capital productivity"); it is — with all qualifications — a rough measure of the change in the capital/output ratio or of the overall "productivity" of the capital stock. It will be seen that in only one country was there a really substantial increase in capital productivity (i.e. a fall in the capital/output ratio) — namely in Italy (where it was particularly rapid in 1958-1961). In Belgium, France and western Germany, the year-by-year figures (in Chart 2.3) suggest some underlying upward trend in capital productivity (but in Belgium mainly in the 1960s, when the "defensive investment" of the 1950s gave way to a more growth-oriented development). But in the Netherlands, Norway and the United Kingdom the productivity of capital appears to have remained — apart from cyclical fluctuations — very constant.

The significance of these big differences in capital/output ratios cannot be discussed at length here. It depends heavily on the composition of capital and on the ways in which it is used. But it should be emphasized that changes in the productivity of capital are not purely functions of capital itself or of technology in the narrow sense. They are also connected with changes in the effectiveness of the labour force and with the ways in which production is organized. For example, the increase in capital-productivity in Italy may well be part of the result of the improvements in the "quality" of the labour force.

Changing cost structures, by sector

The trends in costs that have been described apply to each economy as a whole. For many countries, it is impossible from existing information to estimate the sectoral composition of changing unit costs, but an attempt has been made to apply a sector analysis in five countries for which sufficient data exist: Belgium, western Germany, Italy, Norway and the United Kingdom. The sectors distinguished are agriculture (including forestry and fishing), manufacturing, construction, and a residual sector covering the rest of the economy (including mining, public utilities, transport, distribution and other services, and public administration).[23] Because of the weakness of the estimates of the numbers of self-employed, and the inherent difficulties of measuring output volume, not much significance can be attached to the resulting cost analysis for agriculture or for the residual sector. Consequently most emphasis is placed on cost changes in manufacturing and construction.[24] Chart 2.4 shows

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[22] They are described in the source for which most of the benchmark estimates have been taken (*Income and Wealth Series VIII. The Measurement of National Wealth*, London 1959).

The figures used represent capital stock, net of depreciation, at constant prices. Because of the inadequacies of estimates of capital consumption or depreciation (even at replacement cost) as measures of changes in productive capacity, it would have been preferable to use estimates of gross capital stock. But for most countries only net estimates exist. Alternative estimates of gross capital stock can be made for western Germany, the Netherlands and the United Kingdom. For the first two countries, the percentage changes in gross and net capital stock are almost identical. For the United Kingdom, the gross capital stock increased over the period about 6 per cent more than the net. The official estimate of the gross capital stock in the United Kingdom (shown in *National Income and Expenditure 1966*) is derived in a somewhat different way, which cannot be applied to other countries, and shows a somewhat smaller increase.

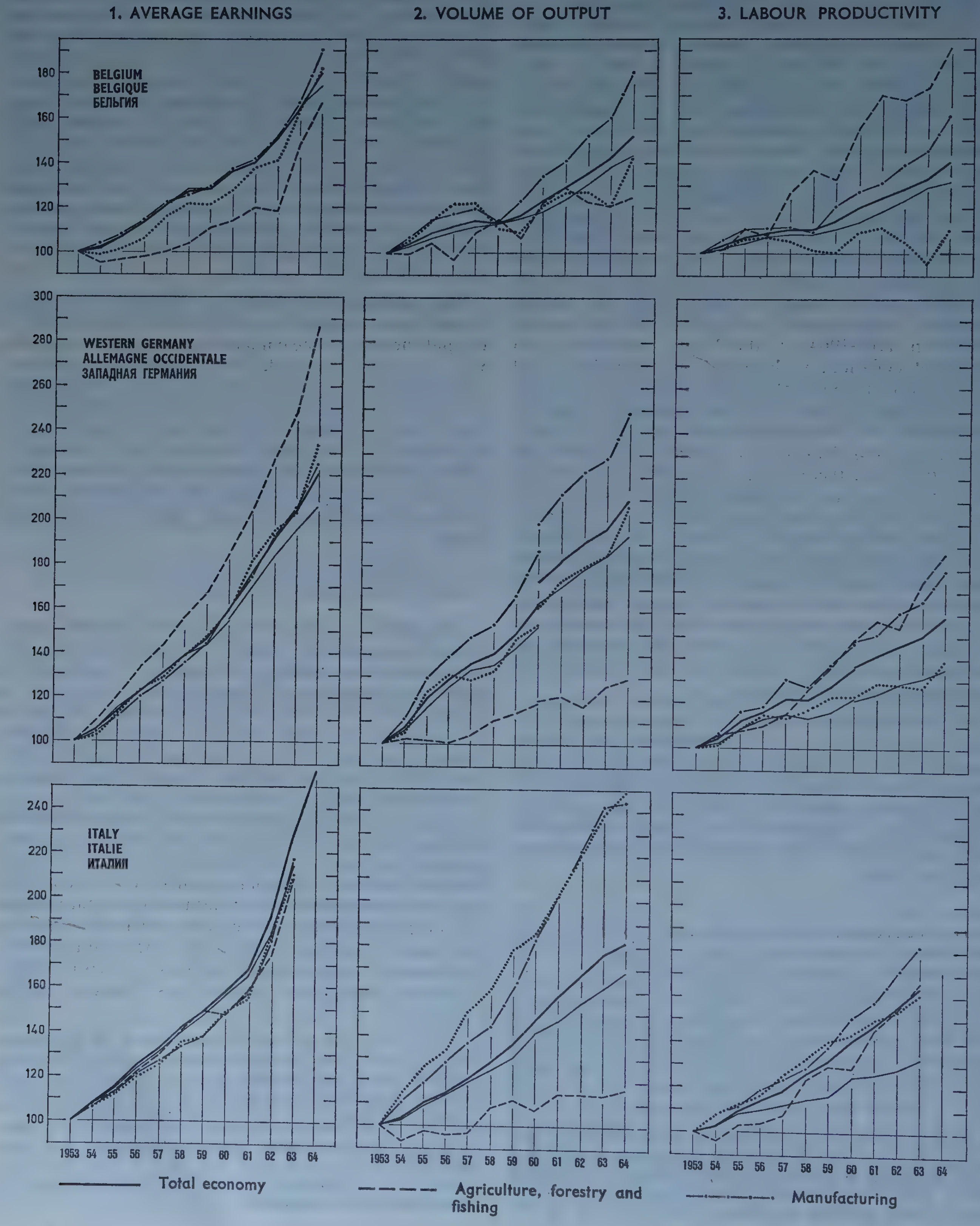
[23] The data for Italy are taken from De Meo, *op. cit.* It should be noted that labour input is measured by man-years (except for agriculture) in De Meo's study; for other countries by numbers employed. The estimates of the "labour content" of self-employment income by sectors are based on the average wage/salary in that sector. Note also that the distribution of numbers of self-employed between sectors is often even weaker than the estimate for the whole economy.

[24] But note the qualification above (page 8) on the estimates of output volume in construction.

CHART 2.4

Earnings, output, labour productivity and factor costs in selected economic sectors in five western European countries, 1953 to 1964

Indices, 19 53 = 100

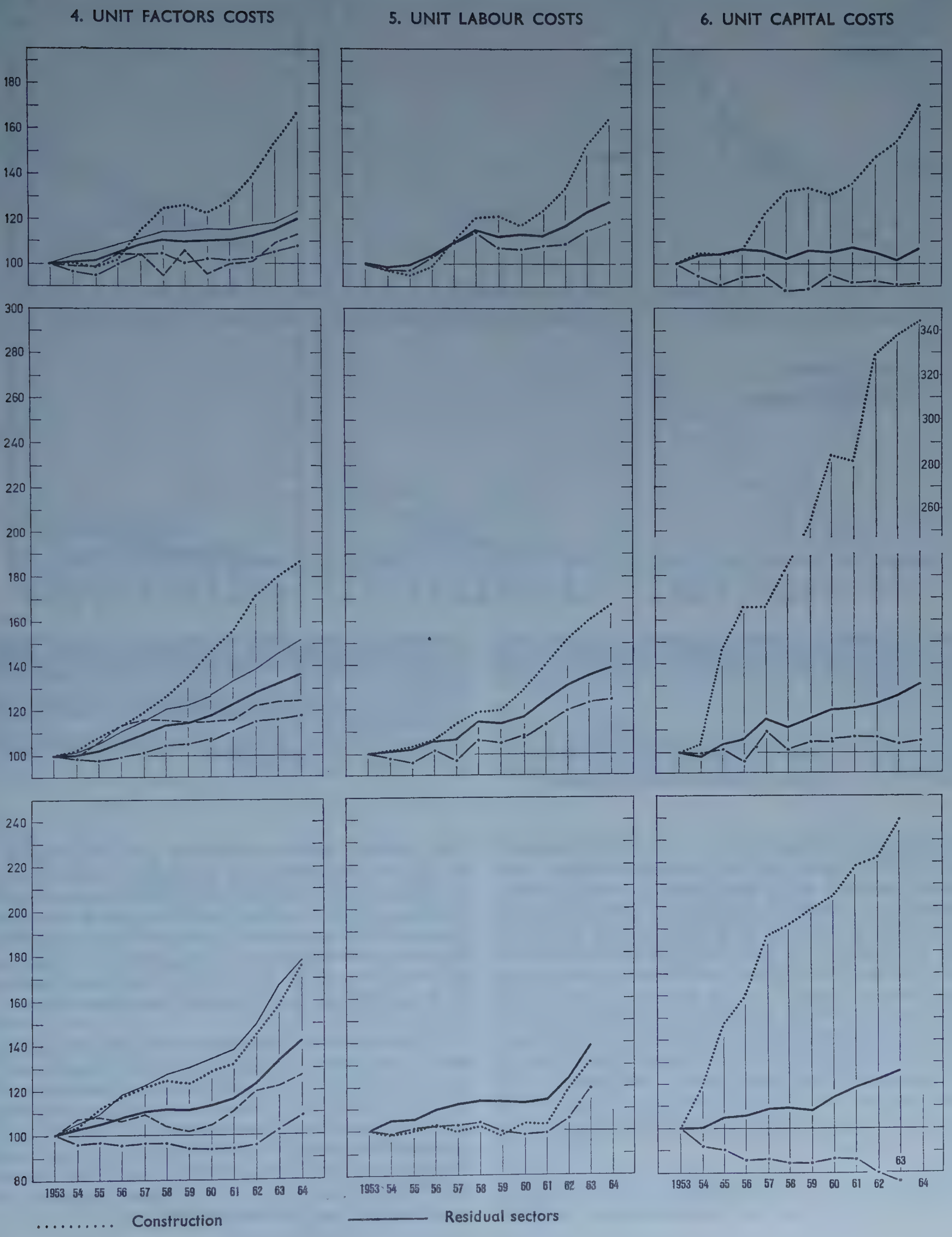


1. AVERAGE EARNINGS

2. VOLUME OF OUTPUT

3. LABOUR PRODUCTIVITY

CHART 2. 4 *(continued)*

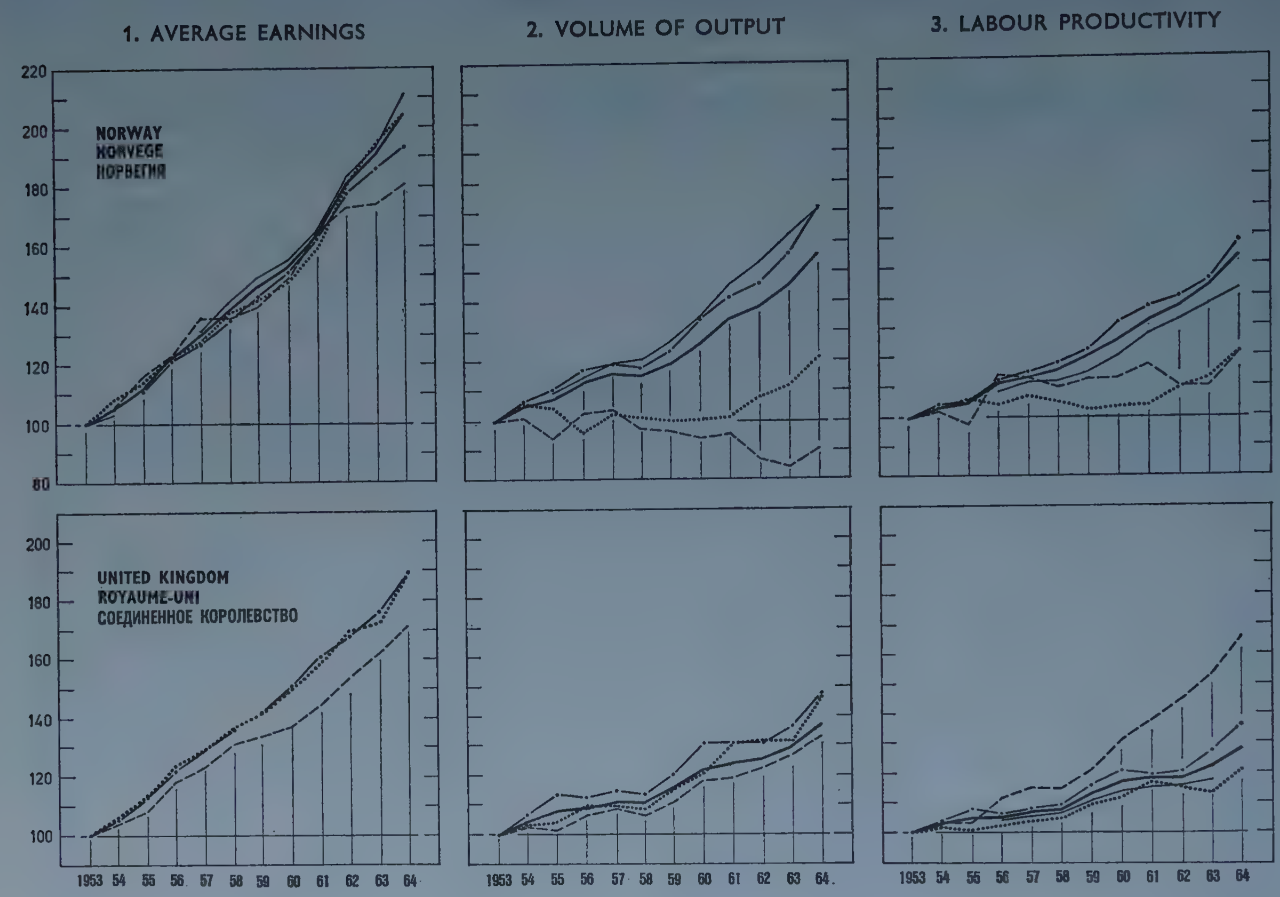


4. UNIT FACTORS COSTS

5. UNIT LABOUR COSTS

6. UNIT CAPITAL COSTS

CHART 2.4 *(continued)*



Sources : For employment, see Table 2.11. For output, compensation of employees and related data: *United Nations Yearbook of National Accounts Statistics;* national sources; data supplied by Central Statistical Offices; and Secretariat's estimates. For Italy, also G. De Meo, *Produttività e distribuzione del reddito in Italia nel periodo 1951-1963,* Rome 1965.

NOTE

Average earnings — The series refer to average remuneration per head employed, obtained, for each of the four sectors covered and for the whole economy, by dividing the total compensation of employees (including employers' contributions to social security) by the number of wage- and salary-earners. For Belgium, the breakdown by sector of the total compensation of employees has been partly estimated.

Volume of output — Gross domestic output at factor costs. For western Germany for which output for individual sectors is only given at market prices, the corresponding series at factor costs have been obtained by using data on net indirect taxes by sector, partly estimated.

Labour productivity — Output per head employed, obtained by relating the indices of the employed labour force to the volume indices of output, for each sector and for the whole economy.

Unit factor costs — Factor costs per unit of output, obtained by relating the indices of output at current factor costs to the indices of output at constant factor costs for each sector and for the whole economy.

the cost analysis by sectors for each of the five countries and Table 2.12 sums up global changes in output, productivity and unit factor costs between 1953 and 1964. The first point to observe is that, in each of these countries, average labour earnings have increased by about the same proportion, over the whole period 1953-1964, in all four sectors. Agriculture, it is true, appears to have lagged behind (except in western Germany). The residual sector kept pace with the general average, and with manufacturing (except again in western Germany where it has been lagging since 1959). Average labour earnings in manufacturing and construction on the whole moved closely together, but in western Germany and Norway construction appears to have been leading for a good part of the period.[25]

By contrast, differences between these two sectors in the rate of increase of labour productivity were, as might be expected, very wide indeed (as were the increases in total output). In particular, the slow rate of increase in productivity in construction, compared with manufacturing, was particularly marked, though less so in Italy and the United Kingdom than in the other three countries (in Italy, this difference appeared only after 1958).

Consequently, total unit factor costs rose comparatively little in manufacturing (hardly at all in Belgium, or in Italy, until 1964), but very fast in construction. The increase in unit factor costs in manufacturing between 1953 and 1964 varied between less than 10 per cent in Belgium and Italy to over 30 per cent in the United Kingdom. But the corresponding increases in construction were between 60 per cent (United Kingdom) and nearly 90 per cent (western Germany).

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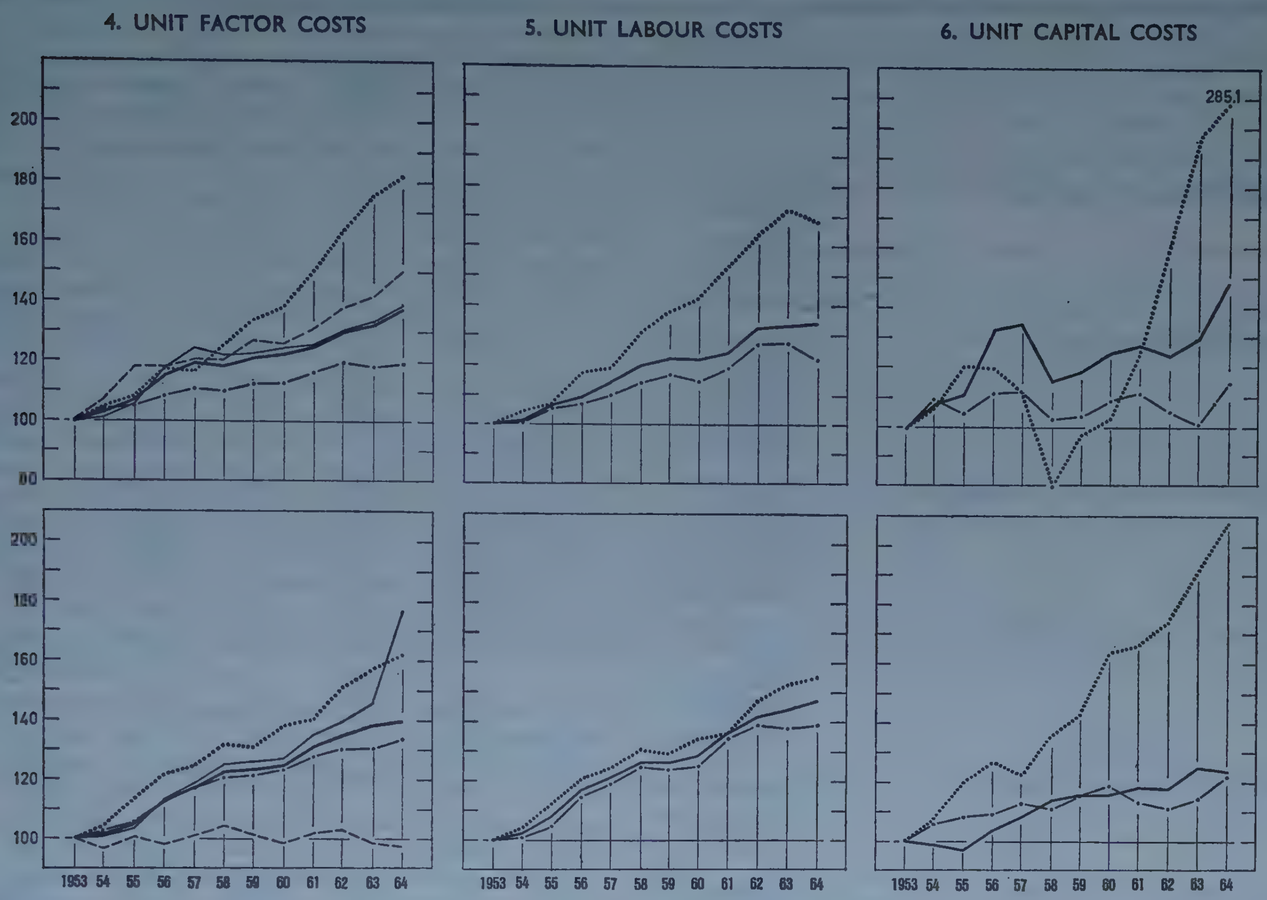
[25] Changes in wages and salaries, by sector and branch, are analysed in much more detail and more comprehensively in Chapter 5.

CHART 2.4 *(continued)*



Unit labour costs — Labour costs per unit of output, obtained, for each sector, by relating the indices of total labour costs to the volume indices of output. Total labour costs have been obtained by adding to total compensation of employees the imputed labour remuneration of self-employed (estimated, for each sector, by multiplying the average earnings per head of wage- and salary-earners in the sectors concerned by the corresponding numbers of self-employed). The series of total labour costs for the whole economy have been obtained by adding together the series for the four sectors. Therefore, unit labour costs for the whole economy are weighted averages of unit labour costs for the four sectors covered. For Italy data are taken directly rom De Meo, *op. cit.*

Unit capital costs — Capital costs per unit of output, obtained, for each sector, by relating the indices of total capital costs to the volume indices of output. The total capital costs have been derived as residuals, by deducting the total labour costs (see above) from the total gross domestic product at factor costs for each of the four sectors covered. The series of total capital costs for the whole economy have been obtained by adding together the series for the four sectors. Therefore, unit capital costs for the whole economy represent weighted averages of unit capital costs for the four sectors covered.

There is a break in the western German series between 1959 and 1960 due to the inclusion of west Berlin and the Saar from 1960 onwards.

In manufacturing, unit labour costs rose rather more than total factor costs, and unit capital costs rather less (although the differences are comparatively small in Norway and the United Kingdom). This is in broad conformity with the trend in the whole economy, except in western Germany and Italy. In western Germany, unit capital costs and unit labour costs rose by roughly similar amounts in the economy as a whole, but in manufacturing there was a much bigger increase in unit labour costs, and unit capital costs hardly increased at all; in fact, in western Germany, the rise in unit capital costs was heavily concentrated on construction and the residual sector. In Italy, too, unit capital costs increased in the economy as a whole, though less than labour costs. But unit capital costs in manufacturing were quite heavily reduced. Per unit of output the return on capital in Italian manufacturing fell by about a quarter over the whole period 1953-1964 and the fall was fairly continuous. The substantial overall rise in the return on capital per unit of output in Italy occurred in the non-manufacturing sectors and was especially marked in construction. The United Kingdom, it may be observed, was the only country of the five where unit capital costs (returns) in manufacturing kept pace with those in the economy as a whole, and that is broadly true throughout the decade.

In construction — an industry sheltered from foreign competition — unit capital costs (returns), by contrast, increased in all five countries much faster than unit labour costs (the difference was small in Belgium) and much faster than capital costs in the economy as a whole. Thus, in manufacturing, the evidence points to a general shift in factor returns — though a small one in Norway and the United Kingdom — from capital to labour; in construction, to a very general shift from labour to capital.

TABLE 2.12

Changes in output, productivity and factor costs in selected economic sectors in five western European countries, 1953 to 1964

		Belgium	Western Germany	Italy [a]	Norway	United Kingdom
		Index for 1964, 1953 = 100				
Volume of output at factor cost	Total economy	152	210	177	155	137
	of which :					
	Agriculture	125	130	114	91	133
	Manufacturing	180	248	242	171	148
	Construction	142	207	239	121	147
	Residual sectors	143	193	161	171	130
Output per head employed	Total economy	141	159	164	153	128
	of which :					
	Agriculture	191	187	166	121	166
	Manufacturing	161	180	182	158	136
	Construction	110	140	161	121	121
	Residual sectors	132	136	133	142	121
Average remuneration per head employed	Total economy	180	221	228	204	188
	of which :					
	Agriculture	167	286	209	181	171
	Manufacturing	191	225	218	193	190
	Construction	182	234	211	204	188
	Residual sectors	174	206	214	211	187
Total factor costs per unit of output	Total economy	120	136	133	137	140
	of which :					
	Agriculture	113	125	122	150	97
	Manufacturing	108	118	103	120	134
	Construction	167	187	158	182	162
	Residual sectors	124	152	167	139	147
Labour costs per unit of output	Total economy	128	139	139	134	147
	of which :					
	Manufacturing	118	125	119	122	139
	Construction	165	167	131	168	155
Capital costs per unit of output	Total economy	107	131	126	147	123
	of which :					
	Manufacturing	91	105	76	115	122
	Construction	170	345	240	285	208
		Percentage shares in 1964				
Gross domestic product at factor cost		100	100	100	100	100
	of which :					
	Agriculture	7	6	15	9	4
	Manufacturing	31	38	33	26	35
	Construction	7	8	8	8	7
	Residual sectors	55	48	44	57	54

Sources: See Chart 2.4.

NOTE. — Agriculture includes forestry and fishing.

[a] 1963.

2.3. FACTOR SHARES: EMPLOYMENT AND SELF-EMPLOYMENT

The preceding discussion has been concerned with labour and capital costs and with their comparative "contributions" to the rise in total costs and prices. The same facts can be used from another angle, to show the changing shares of income accruing to the factors of production. Table 2.13 shows the shares in gross domestic product of income from employment (including employers' contributions to social security) and income from self-employment; in this table we have not attempted to divide the latter between work and property income.

Both categories of income are, of course, very heterogeneous. Employment income covers all wage- and salary-earners from unskilled manual workers to highly qualified technologists and administrators. Changes over time in the share of employment income in the total may be influenced by shifts in the composition of the group. Self-employment income covers farmers, small artisans and traders, all unincorporated enterprises and many in the liberal professions. The share of self-employers in total income varies from country to country and over time according to the composition of this group and the changes in composition; it is influenced particularly by the changing relative importance of agriculture. It is also influenced by shifts between the unincorporated and corporate forms of business organization, which may be the result not only of technical and management trends but also of comparative tax advantages. An increase in the corporate share of total output (which is in many countries associated with a shift from agriculture to industry) tends to increase the share in total income both of employment income and of corporate profits. For these reasons, as the reader has already been warned, no clear-cut analysis of factor shares — in the sense of distribution between income from work and income from capital or entrepreneurship — is really possible.

Employment income, as such, has in most countries increased its share of total gross domestic product.[26] The increase began at different periods (taking the three-year averages shown in the table): in 1956-1958 in Austria, Belgium, France, western Germany, Italy, the Netherlands and the United Kingdom, and in 1959-1961 in Norway and Sweden; in 1962-1964, a marked increase (or further spurt) was apparent in every country shown except Switzerland. Over the whole period, the share of employment income rose most in Italy, the Netherlands and Sweden.[27]

Meanwhile, the share of self-employment income fell everywhere. The fall in the share of self-employment income was greater where it was highest at the beginning of the period — in Austria, Belgium, Finland and France. Of the countries where separate figures of self-employment income in farming are available this accounted for most of the decline, except in Belgium and the United Kingdom (where farm income represents a very small proportion).[28] Substantial declines in non-agricultural self-employment income appear to have occurred only in Austria, Belgium and the United Kingdom.

So far as they go, these figures do not indicate with any certainty significant changes in distributive shares as between labour and capital over the whole period shown. But if the imputed labour share of self-employed (calculated in the previous section) is added to the share of employment income, to get some indication of total income from "work", this combined share of gross domestic product is increased by about 4 percentage points in three countries — Belgium, the Netherlands and Sweden; by 2.5 points in the United Kingdom and by 1.5 points in Norway. In Austria, France and western Germany the labour share declined, and in Italy showed no change.

As pointed out above, changes in income shares must be associated with changes in the proportions of employed or self-employed in the total active population, as well as with changes in average income per head in each sector. The proportion of employed wage/salary earners in the active population has, in fact, increased in every country (Table 2.13); only in the United Kingdom (where it exceeds 90 per cent) has the increase not been substantial. The proportions of self-employed have correspondingly diminished.

These changes in income shares and in proportions of the active population are associated to yield estimates of the *income per head* of the employed and the self-employed relative to gross domestic product per head of the employed labour force (i.e. the wage- and salary-earners plus the self-employed). This provides an indication of relative employment income or self-employment income, after allowing for changes in their respective numbers. The estimates are given in the last part of Table 2.13. From 1953-1955 to 1959-1961, the relative income of wage/salary earners declined in Austria, Finland, France, western Germany, Italy and Sweden (because their income share rose less than their share of the active population). In Belgium and Norway, there was almost no change in the relative income of wage/salary earners, while in the United Kingdom it improved. In 1962-1964 a distinct change in trend is apparent. In every country shown, the relative income of wage/salary earners increased (though not significantly in Norway), and by the end of the period, the relative income of wage/salary earners was significantly better than at the beginning in Belgium, Finland, the Netherlands, Norway, Sweden and the United Kingdom. In Austria and France it had declined; elsewhere it had not significantly changed.

For self-employers, there was a significant decline in relative income in Finland, Sweden and the United Kingdom, but a very marked increase in France (because of the rapidly declining proportion of farmers) and, probably, in Switzerland. In Austria and Belgium, the change was not substantial (in Austria, a marked increase in 1956-1958 was followed by a drop in 1962-1964 which is difficult to interpret). Where relative incomes of farmers and other self-employed can be estimated separately, it appears that in Belgium farmers improved their position while that of the others declined; in Finland and the United Kingdom, the relative incomes of both groups declined.

One further point may be made. Employment income is divided between wages and salaries in the statistics for two countries — western Germany and the United Kingdom. In both countries, and this may well apply elsewhere, the wage bill has declined steadily in relation to the salary bill; this is the result not of any greater increase in average salaries than in average wages — both have moved rather closely together — but of the norma-tendency for the proportion of salary-earners to wagel earners to increase.[29] Thus the share of wages, *stricto sensu*, in the domestic product may well be generally

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[26] There was no clear trend, in most countries, in the employment income share in 1948-1955. See *Economic Survey of Europe in 1956*, Chapter VIII, page 2.

[27] The increasing share from 1953-1955 to 1962-1964 in Finland was due wholly to an increase in employers' contributions to social security; in Austria, Norway and the United Kingdom this accounted for nearly half the increase, in Belgium and France for almost one-third, and in western Germany and the Netherlands for about one-fifth.

[28] It must be remembered that farm income may include a significant proportion of part-time income from farming accruing to people with other sources of income as well.

[29] The relation of wages and salaries is more fully explored in Chapter 5, page 27.

TABLE 2.13

Income shares: wage-earners and salary-earners and self-employed, 1953 to 1964

Percentages

Country and period		Share in GPD at factor costs					Share in total employment				Relative income per head (GDP at factor cost per head employed = 100)			
		Income from employment		Income from self-employment			Wage- and salary-earners	Self-employed			Wage- and salary-earners	Self-employed		
		Total[a]	*of which:* wages and salaries	Total	in agriculture	outside agriculture		Total	in agriculture	outside agriculture		Total	in agriculture	outside agriculture
Austria	1953-1955	52.3	46.1	28.6	10.3	18.3	64.1	35.9	..	..	81.6	79.7	..	..
	1956-1958	53.5	46.5	27.9	9.1	18.8	68.5	31.5	..	..	78.1	88.6	..	..
	1959-1961	53.7	46.4	25.6	7.3	18.3	70.4	29.6	..	..	76.3	86.5	..	..
	1962-1964	55.8	47.8	23.0	6.5	16.5	71.0	29.0	..	..	78.6	79.3	..	..
Belgium	1953-1955	48.4	44.0	26.0	5.1	20.9	74.8	25.2	8.4	16.9	64.7	103.2	60.7	123.7
	1956-1958	50.8	45.8	24.1	4.7	19.4	76.3	23.7	7.3	16.4	66.6	101.7	64.4	118.3
	1959-1961	51.3	46.1	23.7	4.8	18.9	77.1	22.9	6.6	16.3	66.5	105.5	72.7	115.9
	1962-1964	53.8	47.9	22.2	4.4	17.8	78.6	21.4	5.7	15.7	68.5	103.7	77.2	113.4
Finland	1954-1955	51.7	46.8	20.3	14.3	6.0	70.3	29.7	23.7	6.0	73.5	68.3	60.3	100.0
	1956-1958	51.8	46.9	18.2	12.6	5.6	71.2	28.8	22.6	6.2	72.8	63.2	55.7	90.3
	1959-1961	50.4	45.4	17.9	12.5	5.4	72.1	27.9	21.8	6.1	69.0	64.2	57.3	88.5
	1962-1964[b]	53.0	46.8	16.6	11.4	5.2	70.9	29.1	22.5	6.6	74.8	57.0	50.7	78.8
France	1953-1955	51.2	41.1	27.1	..	..	65.8	34.2	20.3	13.9	77.8	79.2	..	..
	1956-1958	52.7	42.9	26.6	..	..	69.0	31.0	17.9	13.1	76.4	85.8	..	..
	1959-1961	53.3	43.3	25.6	8.3	17.3	71.1	28.9	16.4	12.6	75.0	88.6	50.6	137.3
	1962-1964	56.1	44.6	23.8	7.7	16.1	73.5	26.5	14.7	11.8	76.3	89.8	52.4	136.4
Western Germany	1953-1955	52.9	47.8	..	..	..	72.7	27.3	16.2	11.1	72.8	..	..	..
	1956-1958	54.0	48.3	..	..	..	75.1	24.9	14.2	10.7	71.9	..	..	..
	1959-1961	54.9	48.9	..	..	..	77.2	22.8	12.0	10.8	71.1	..	..	..
	1962-1964	57.0	51.0	..	..	..	79.2	20.8	10.4	10.3	72.0	..	..	..
Italy	1953-1955	45.1	..	..	..	..	55.7	44.3	29.4	14.9	81.0	..	..	..
	1956-1958	46.4	..	..	..	..	56.9	43.1	27.0	16.1	81.5	..	..	..
	1959-1961	46.7	..	..	..	..	59.1	40.9	23.7	17.2	79.0	..	..	..
	1962-1964	52.1	..	..	..	..	64.4	35.6	18.4	17.2	80.9	..	..	..

Netherlands	1953-1955 . .	49.2	42.6	..	..	..	76.3	23.7	9.3	14.4	64.5	..	..	..
	1956-1958 . .	51.4	44.4	..	..	..	78.2	21.8	8.3*	13.5*	65.7	..	..	..
	1959-1961 . .	52.3	45.1	..	..	..	79.4	20.6	7.5*	13.0*	65.9	..	..	..
	1962-1964 . .	57.1	48.9	..	..	..	80.4[c]	19.6[c]	..	..	68.3[c]	..	..	..
Norway	1953-1955 . .	51.5	50.6	11.1[d]	8.7	2.4	69.7	30.3	21.8	8.5	73.9	..	39.9	..
	1956-1958 . .	51.7	50.7	10.1[d]	7.9	2.2	71.4	28.6	20.4	8.1	72.4	..	38.7	..
	1959-1961 . .	54.8	52.9	9.4[d]	6.7	2.7	73.3	26.7	19.0	7.7	74.8	..	35.3	..
	1962-1964 . .	56.5	53.6	8.3[d]	5.6	2.7	74.8	25.2	17.7	7.4	75.5	..	31.6	..
Sweden	1953-1955 . .	64.3	..	11.9	..	..	82.8	17.2	9.5	7.7	77.7	69.2	..	..
	1956-1958 . .	64.9	..	10.5	..	..	84.3	15.7	8.4	7.2	77.0	66.9	..	..
	1959-1961 . .	66.2	..	9.2	..	..	85.8	14.2	7.4	6.8	77.2	64.8	..	..
	1962-1963 . .	70.1	..	8.5	..	..	82.2	12.8	6.4	6.5	85.3	66.4	..	..
Switzerland	1953-1955 . .	56.1	51.4	18.3	6.4	11.9	74.8[e]	25.2[e]	12.5[e]	12.6[e]	75.9[e]	80.1[e]	59.2[e]	101.3[e]
	1956-1958 . .	55.6	50.7	17.7	5.9	11.8								
	1959-1961 . .	55.6	50.4	17.4	5.4	12.0	80.8[f]	19.2[f]	8.6[f]	10.6[f]	68.5[f]	90.1[f]	61.3[f]	113.5[f]
	1962-1964 . .	56.9	51.5	16.6	4.9	11.7								
United Kingdom	1953-1955 . .	65.9	61.9	9.0	3.1	5.9	92.8	7.2	1.8	5.4	71.0	125.0	172.2	109.3
	1956-1958 . .	67.2	62.9	8.1	2.7	5.4	93.0	7.0	1.7	5.3	72.3	115.7	158.8	101.9
	1959-1961 . .	67.3	62.6	7.8	2.6	5.2	93.1	6.9	1.7	5.3	72.3	113.0	152.9	98.1
	1962-1964 . .	68.5	63.4	7.2	2.4	4.8	93.2	6.8	1.6	5.1	73.5	105.9	150.0	94.1

Sources: See Tables 2.7 and 2.11.

[a] Including employers' contributions to social security.

[b] Data for employment are not comparable with previous periods.

[c] 1962 only.

[d] Data for self-employment cover only agriculture, forestry, fishing and liberal professions, and persona services.

[e] 1950.

1960.

declining. The distinction between wage- and salary-earners is, of course, a rather arbitrary one. However, the influence on total employment income of the shift towards salaries does have some significance in that it indicates a change in the type of labour used rather than a change in the cost of a given " unit " of labour (see Table 2.14).

Property income of households

Employment and self-employment income make up the greater part of the share of income accruing to the household or personal sector. The other form of factor incomes which accrues to the household sector is property income: from rent, interest and dividends.[30] The property income of households, as a share of household primary income, is shown in Table 2.15 together with its components. The information is not available for all countries. There may also be differences in definition affecting inter-country comparisons.

On these figures, property income of households nowhere amounts to more than about one-eighth to one-tenth of household primary income. In some countries it is much less — for instance in France and Norway. There may be various reasons for the differences in the proportion: thus the proportion would be low where property values have been eroded through inflation; where rent controls remain severe; or where ownership of profit-earning assets by households is not extensive, e.g. because of a large degree of public ownership[31] or because of a long history of industrial self-financing; or because distribution of profits is on a restricted scale.[32]

No general trend appears in the impact of property income on distributive shares. In the rather limited number of countries for which data are available, the share of household primary income accruing to households in the form of property income rose in Finland, Norway and the United Kingdom, but in none of them very markedly. It declined slightly in Belgium, France and Switzerland while it did not change in Ireland and Sweden. The components of property income are available for a still more restricted list of countries. The share of rent has sometimes fallen and never significantly increased; in spite of the generally declining importance of rent controls, total rental income for households has not increased more rapidly than other components of household primary incomes. The only item which has shown a certain tendency to increase (except in Finland) is "interest"; this may be the result partly of rising interest rates, partly of an increasing preference for industrial financing through fixed interest obligations rather than equities, or partly, too, of the fact that in many countries the major channel of investment, for the increasing amount of personal savings, is still the various forms of fixed-interest assets.[33]

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[30] It should be recalled that the household sector includes private non-profit-making bodies.

[31] It should be noted that interest on the public debt is not included as an element of factor income in the standard national accounting system but has been included in Table 2.15, to the extent that it accrues to households.

[32] Undistributed profits of corporations are recorded separately in the national accounts; they may be regarded as ultimately accruing to the owners of the capital through appreciation of share values.

[33] See *Economic Survey of Europe in 1965*, Part 1, Chapter II, pp. 91-93. It is shown there that, for example in France and western Germany, household assets consist predominantly of bank deposits and of holdings in various kinds of fixed interest securities, in strong contrast to the position in the United Kingdom and the United States.

TABLE 2.14

Income and employment shares: wage-earners and salary-earners in some western European countries, 1953 and 1963

Percentages

Country and period		Share in total wage/salary bill		Share in total employment		Relative income per head[a]
		Wage bill	Salary bill	Wage-earners	Salary-earners	
Austria	1953	59.1	40.9	68.7	31.3	1.52
	1964	52.3	47.7	62.0	38.0	1.49
Belgium	1953	53.3	46.7	67.5	32.5	1.82
	1963	50.0	50.6	63.9	36.1	1.77
France	1954	61.1	38.9	72.4	27.6	1.67
	1964	55.2	44.8	68.3	31.7	1.75
Western Germany	1953	60.9	39.1	72.1	27.9	1.66
	1963	55.5	44.5	65.3	34.7	1.51
Norway[b]	1953	79.1	20.9	84.3	15.7	1.42
	1963	74.0	26.0	80.4	19.6	1.44
Sweden[b]	1953	73.0	27.0	80.3	19.7	1.51
	1963	66.4	33.6	75.7	24.3	1.58
United Kingdom[c]	1954	73.9	26.1	81.4	18.6	1.55
	1964	68.3	31.7	76.6	23.4	1.52

Sources: National statistics.

[a] Ratio of salaries per head to wages per head.

[b] Data taken from censuses of industry.

[c] Manufacturing only. For the whole economy, the wage proportion of both wages and salaries fell from 66.4 per cent in 1954 to 60.6 per cent in 1964. Data for total employment in the two categories are not available.

TABLE 2.15

Household income from property in selected western European countries

Percentage shares

Country and period		Household property income as percentage of household primary income	Percentage composition of household property income		
			Rent	Interest	Dividends
Belgium	1953-1955	15.3	60.6	21.7	17.7
	1956-1958	15.1	55.8	24.1	20.1
	1959-1961	14.8	51.9	29.1	19.0
	1962-1964	13.5	45.4	34.9	19.7
Finland	1954-1955	10.4	40.4	38.8	20.8
	1956-1958	12.3	51.5	33.2	15.3
	1959-1961	13.1	53.4	30.6	16.0
	1962-1964	13.5	52.2	33.8	14.0
France	1953-1955	7.1	30.3	25.5	44.1
	1956-1958	6.5	27.8	30.1	42.0
	1959-1961	6.4	33.9	30.8	35.3
	1962-1964	6.2	39.6	32.2	28.1
Ireland	1953-1955	7.3	..	..	..
	1956-1958	8.0	..	..	..
	1959-1961	8.8	..	..	..
	1962-1964	7.8	..	..	..
Norway	1953-1955	3.4	21.6	54.1	24.3
	1956-1958	4.5	30.4	49.3	20.3
	1959-1961	5.0	28.9	51.2	19.9
	1962-1964	4.6	19.1	60.0	20.9
Sweden	1953-1955	11.9	17.1	21.3	61.6
	1956-1958	12.1	17.6	22.4	60.0
	1959-1961	12.3	18.8	23.1	58.1
	1962-1964	11.6	16.2	23.1	60.7
Switzerland	1953-1955	12.0	33.1	37.4	29.4
	1956-1958	11.9	30.8	40.2	29.0
	1959-1961	11.4	28.3	43.9	27.8
	1962-1964	10.6	28.0	44.6	27.4
United Kingdom	1953-1955	10.0	17.2	82.8	
	1956-1958	9.7	20.2	79.8	
	1959-1961	11.3	22.4	77.6	
	1962-1964	11.7	22.2	77.8	

Sources: United Nations, *Yearbook of National Accounts Statistics;* and national statistics.

2.4. SUMMARY OF SOME MAIN FINDINGS

Overall price levels

(*a*) Final expenditure prices were rising in most western European countries during both of the two periods into which the analysis has been divided — 1953 to 1958, and 1958 to 1964. There was a certain interruption of the increase around 1958-1959 — a time of mild but rather general recession. A number of countries where price rises were moderate in the earlier period experienced some acceleration after 1958. In 1958-1964 the rate of price change for final expenditure, throughout western Europe, converged upon increases of 2 to 4 per cent a year.

(*b*) The importance of international trade as a moderating influence on price increases is clearly marked. Both export and import prices have risen much less than prices of domestic output. In part (on the import side) this is because of falling relative prices of primary products. But it remains true, both for imports and exports, even when allowance is made for the different composition of international trade and domestic output, and particularly for the greater share in international trade of manufactured goods. It appears that prices of manufactured goods in international trade have risen distinctly less, in most though not all countries, than prices of manufactures produced and sold in the domestic market.[34]

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[34] It must be recalled that the foreign trade "prices", being generally current weighted unit values, reflect the normal tendency for trade to increase most in items whose prices have risen least.

(*c*) There is not, however, much correspondence between the trends of export prices and domestic prices; countries with more than average increases in domestic prices have not necessarily had more than average increases in export prices.

(*d*) The moderating impact of imports on the price level is due more to the differing rates of expansion of the volume of imports (in relation to the volume of final expenditure) than to differing rates of decline in relative import prices.

The pattern of price increases

(*e*) For *consumer goods and services*, fairly common features have been: greater than average increases in rents (due partly to progressive decontrol, partly to rising relative costs of construction and land); greater increases in the prices of services than in manufactured goods; less than average increases in food prices (though less marked after 1958 than before). In particular, it appears that the high income elasticities of demand for many services, combined with relatively small increases in productivity and protection from international competition, must inevitably create pressures on the overall price level. Overall price stability in consumers' goods and services must, in these conditions, require a regular *decline* in prices for manufactures; although the price rises for manufactured consumers' goods have often been very moderate, no evidence is found of any sustained decline in them during the period of observation.[35]

(*f*) Prices of *investment goods* have in some countries risen somewhat faster, in others rather less, than consumer prices. The striking feature — especially after 1958 — is the considerably faster rise in the prices for construction than for machinery and equipment. (The difficulties of estimating "prices" for construction must be recalled.) The implied prices for *public consumption* (again presenting great difficulties of estimation) rose even more than those for construction.

Changing cost structures

(*g*) The statistical difficulties of separating the contributions of "labour" costs and "capital" or "entrepreneurship" costs to the rise in prices have been emphasized. Apart from the paucity of statistics about profits (except as a residual in the national accounts) there is the problem of allocating the income of the self-employed. An attempt is made to cope with the allocation of self-employment income by imputing to the self-employed a labour income equal to average wage/salary earnings, treating the rest of self-employment income as a return to capital. On this arbitrary basis, the rise in domestic costs per unit of output has been divided into total labour costs, capital costs and net indirect taxes.

(*h*) Per unit of total output, labour costs (or labour incomes) have risen more than capital costs (or returns) in Belgium, Italy, the Netherlands, Sweden and the United Kingdom, over the whole period 1953-1964. In France, western Germany and Norway, unit labour costs and unit capital costs rose by almost the same proportion. In Austria unit capital costs rose more.

(*i*) An important element in the rise in labour costs was the general increase in employers' contributions to social security, which everywhere rose more than direct wages and salaries. These contributions are treated in national accounts as a part of labour income; from another point of view they might be regarded as taxes. If employers' contributions are excluded from labour income (or if social security were financed out of general taxation) the apparent rise in labour costs would be distinctly less.

(*j*) Changes in capital costs (or returns) are also related to estimates of the input of capital, based on rough estimates of changes in the fixed capital stock in several countries. It is found: (i) that the overall "productivity" of the capital stock (output per unit of capital stock) in most countries changed very little; there was a slight rise in some countries but a marked rise only in Italy; (ii) the rate of return on capital (in the sense of total capital costs, or returns, per unit of capital stock) generally rose much less than average labour income per person employed. (Indeed if capital returns are deflated by domestic output prices, the real return per unit of capital stock increased only in France, western Germany and Italy.)

(*k*) Year-to-year fluctuations in capital costs, or returns, per unit of output (or per unit of input) are much wider than those in labour returns or in prices. Unit capital costs carry the greater part of the short-term fluctuations in output.

(*l*) For four countries, it has been possible to extend this analysis of changing cost structures to each of four sectors of the economy (agriculture, manufacturing, construction, and the rest of the economy). It was found that: (i) labour earnings per head increased about equally in each sector; (ii) the productivity increases were markedly different — the slower increase in construction than in manufacturing being particularly striking; (iii) total factor costs (labour plus capital) per unit of output rose comparatively little in manufacturing — in some countries hardly at all — but rose fast in construction; (iv) thus for manufacturing there is clear evidence of pressure on profit margins, whereas capital costs (or returns) in construction appear to have risen faster than labour costs per unit of output.

Factor shares

(*m*) The same facts can be looked at from the point of view of the shares in income of factors of production. Employment income (*excluding* here the imputed labour income of the self-employed) in most countries increased its share of gross domestic product — notably in the early 1960s. But this was in part due to the rising proportion of wage/salary earners in the labour force offset by the general fall in the proportions of self-employed. The "wage ratio" (wages and salaries per wage/salary earners employed, as a proportion of household primary income per head of the whole labour force) increased significantly in only a few countries (Belgium, Finland, Norway, the United Kingdom). The relative income of the self-employed, similarly measured, was stable or falling (except in France).

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[35] As noted in (*l*) below, factor costs per unit of output in manufacturing (i.e. manufacturers' prices excluding the effects of prices of inputs from other sectors and of imports, and excluding net indirect taxes) hardly increased at all in some countries. But the comment above refers to retail prices.

(*n*) If a part of self-employment income is attributed to "labour" income (in the way described above), the combined share of total labour income in household primary income increased in Belgium, the Netherlands, Norway, Sweden and the United Kingdom; declined in Austria, France and western Germany; and remained stable in Italy.

(*o*) A further distinction, admittedly arbitrary, can be made within labour income in a few countries — that between wage-earners and salary-earners. The general tendency has been for the proportion of salary-earners to increase but for their average incomes to rise at about the same rate as those of wage-earners. Since average salaries are generally higher than average wages, this shift contributes significantly to the rise in labour costs per unit of output.

(*p*) The share of property income of households — which does not amount to more than one-eighth of household primary income and is in many countries less — shows no general trend to rise or fall. There is, however, some tendency for the "interest" component in this total (as distinct from rent and dividends) to rise, partly perhaps as a result of increasing household savings.

CHAPTER 3

PAY DEVELOPMENTS IN WESTERN EUROPE SINCE 1952—STATISTICAL COMPARISONS

3.1. GENERAL REVIEW

In the present chapter, we are concerned with one aspect only of the developments described in Chapter 1 — the increases in pay. The chapter deals mainly with wages, as opposed to total wages and salaries, simply because sufficiently detailed and frequent data for salaries are missing for many countries. For the same reasons, analysis is mostly confined to wages in industry, generally in manufacturing only.

First, the chapter contains a very summary comparative review of rates of increase in pay in western European economies, their relation to productivity increases, and the result in terms of unit labour costs in industry. The second part endeavours to explore some of the general economic factors which appear, from statistical analysis, to be associated with the rates of increase in wages, in particular, levels of unemployment and changes in consumer prices. The third part of the chapter explores some of the factors lying behind the development of wage drift.

The pressures of full employment, when free collective bargaining was restored after the war, gave rise to a number of innovations and experiments in the methods of arranging pay changes. These have taken three forms (to be described more fully in Chapter 4): (*a*) efforts to co-ordinate sectional pay settlements, especially by establishing a form of periodical *central negotiation* between the central trade union federation and the corresponding employers' federation, determining a co-ordinated framework for sectional bargaining; some form of co-ordination of pay increases has existed for most of the postwar period in Denmark, Finland, Norway and Sweden and, in a different form, in Austria; (*b*) the experiment in the Netherlands, of which the special feature, unique in western Europe, is the *statutory enforcement* of approved collective agreements, providing maximum as well as minimum pay levels, together with the central negotiation, in which the government has played a part, of a framework for pay changes;[1] (*c*) the exercise in various ways of *government persuasion and pressure* on pay bargainers — a practice which has now become almost universal but is of very varying significance in different countries.[2] To these have been added, in several countries, various methods of seeking directly to influence the course of prices.

The influence of "policy", whether exercised by government or by the strategy of unions or management organizations, is necessarily restricted, for the most part, to the framework of formal collective bargaining. A most important feature of the postwar period, closely associated with conditions of full employment, is the very widespread and substantial influence of pay settlements in individual enterprises or groups, yielding levels of actual earnings well above, and often increasing faster than, those provided by normal collective bargaining. This second tier of pay settlement is the element of drift in the rise in earned incomes. (Rates established by collective bargaining, arbitration, statutory determination etc. will be described as "conventional rates", to distinguish them from actual or effective pay described as "earnings".) Drift is by no means a postwar novelty, but its increasing importance has, in some countries, led to the view that the traditional modes of collective bargaining are no longer of major importance in settling pay. This is one of the main issues to be examined.

The various ways of defining drift, and some of the reasons for it, are described below (page 18). For this rapid survey, it is enough to call attention to its importance. It must be emphasized, however, that the measurement of wage drift in any country depends partly on the differing practices of collective bargaining and partly on the statistical conventions used for measuring both conventional pay rates and actual earnings. The interpretation of just what changes in pay will flow directly from the conclusion, or revision, of a collective bargain is never simple. So it is not possible to establish really satisfactory inter-country comparisons of the extent of drift.

In what follows, we are concerned chiefly with pay as an element in costs. Attention is focussed on comparative trends in pay in relation to trends in productivity, and on the resulting trends in unit labour costs. It is recognized that this is only one approach, and a rather narrow approach, to comparing the "performance" of different countries. From a wider point of view, it would be mis-

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[1] Powers for statutory enforcement of maximum pay levels now exist also in the United Kingdom; but the power to fix pay, and prices, by law is limited to specific cases and is intended to be only temporary.

[2] The exercise of government pressure by exhorting unions and employers in general terms to moderate pay increases, in the interests of the economy as a whole, is not of course a postwar innovation. It has been widely used, indeed, in circumstances when it is now recognized to have been grossly inappropriate — for instance, in the Great Depression. What is new is the effort to provide more or less quantitative guidance about the "room for wage increases", and to enforce it by publicity, official inquiries into specific cases, etc.

TABLE 3.1

Pay and productivity changes in manufacturing, and total unemployment 1952-1965

Percentage increases over two periods (annual averages)

Country	Conventional wage rates (hourly)		Average wage-earnings		Wage drift		Output per man-hour in manufacturing		Total unemployment (annual averages, thousands)	
	1952-1958	1958-1965	1952-1958	1958-1965	1952-1958	1958-1965	1952-1958	1958-1965	1952-1958	1958-1965
Austria	4.0 [a]	6.4	5.0 [a]	8.5	1.0 [a]	2.1	4.3	5.6	137	81
Belgium	. .	6.0	5.4	6.6	. .	0.6	2.7 [b]	6.2	132	71
Denmark	2.9	5.2 [c]	4.9	8.7 [c]	2.0	3.5 [c]	2.8	4.6	68	34
Finland	5.8 [c]	5.5 [c]	7.7 [d]	7.8 [c]	1.9 [d]	2.3 [c]	3.3	4.6	. .	37
France [e]	. .	. .	8.6	7.6	. .	. .	3.9	4.3	134	121
Western Germany .	5.7	7.2	6.6	8.9	0.9	1.7	4.7	5.5	985	272
Ireland	3.6	6.1	4.5	6.9	0.9	0.8	2.6	4.5	64	53
Italy	4.1	8.3 [c]	4.4	9.7 [c]	0.3	1.4 [c]	6.3	6.9	1 541 [f]	796
Netherlands [g] . . .	6.5	5.9	8.1	8.0	1.6	2.0	3.7	6.3	63	43
Norway	2.4	3.6	5.5	7.0	3.1	3.4	4.0	5.5	15	17
Sweden [h]	2.8	3.3	5.8	7.2	3.0	3.9	4.1	5.1	31	26
Switzerland	1.8	4.6	3.0	6.5	1.2	1.9	. .	4.0	4	1
United Kingdom [i] .	5.5	4.6	6.2	6.3	0.7	1.7	2.5	3.9	290 [j]	384 [j]
United States . . .	. .	. .	4.2	3.1	. .	. .	3.0	3.9	2 960	4 092

Sources and coverage for wages: See Appendix Table 3.I, page 32.

Output per man-hour: The estimates of manufacturing output used are the official indices of production except for Denmark, France and Norway, for which the estimates of manufacturing output in the national accounts are used.

Unemployment: OECD, *Main Economic Indicators* and *Historical Statistics 1955-1964*; and national sources.

[a] 1953-1958.

[b] Output per man-year.

[c] 1958-1964.

[d] 1954-1958.

For Finland the figures cover all enterprises. The increase in earnings in manufacturing only, in 1952-1958, was 4.9 per cent a year. There are no figures for wage rates in manufacturing only. The difference between the two earnings series in 1958-1965 is negligible.

[e] There are no figures relating strictly to the rates under collective agreements. A series relating to the "most common wage rates actually in effect" will be found in Appendix Table 3.I.

[f] 1955-1958 (sample survey).

[g] Estimates for all enterprises, by Central Planning Bureau. For alternative estimates for industry, see Appendix Table 3.I.

[h] Rates and earnings in November 1952-1962 (yearly averages 1963-1965).

[i] For an estimate excluding the effect of overtime on earnings and drift, see Appendix Table 3.I.

[j] Wholly unemployed excluding school leavers.

leading to consider rates of increase in productivity as given, and pay changes as the major variable factor. Nor can success in keeping down unit labour costs be regarded as the only measure of economic achievement, or even as a certain road to international competitiveness. Nevertheless, it is one criterion of central interest for the development of incomes policies.

Moreover, the significance of increases in pay and in unit labour costs in any one country, during a given period, depends upon their level — relatively to other countries — at the beginning of the period, and on the comparative levels of prices and profits. A relatively large change in unit labour costs may be justified by the need for adjustment to the levels elsewhere. The bare facts about pay and labour costs cannot be fully assessed except in relation to the general pattern of economic development.

Summary data for western European countries, with the United States included for comparison, are given in Table 3.1; the table shows annual changes in conventional rates, in actual earnings, and also in output per worker, all on an hourly basis. The figures relate mostly to manufacturing industry only, because statistics for conventional rates, comparable with those of actual earnings, are not available for the whole economy in many countries. For the same reason, the statistics generally relate only to wage-earners. These limitations introduce certain biases into the results. First, productivity gains in industry have generally been greater than in the rest of the economy, while there has not, as a rule, been a corresponding difference in the development of average pay. Secondly, the number of wage-earners in employment has generally increased less than the number of salary-earners (as was shown in Chapter 2 for some countries); the resulting shift in the employment structure towards higher-paid groups has, in itself, been a factor making for bigger increases in unit labour costs than is shown by statistics restricted to unit wage costs. Further, in countries where self-employment in industry has declined substantially, the estimates of changes in output per worker, which are normally obtained by dividing changes in total output by changes in the number of employed persons only, would normally understate the rise in total productivity. For all these reasons, the changes in "unit labour costs" in industry, as computed here, differ from the more comprehensive data used in Chapter 2.[3] Nevertheless, the relative positions of individual countries are not much affected.[4]

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[3] Both sets of data relate to average earnings and productivity in the whole of the sector and may be influenced by shifts in the pattern of employment within the sector.

[4] Comparison of Table 3.2. with Table 2.9 shows: (*a*) the rise in unit labour costs in Table 3.2 (unit wage costs in manufacturing) is in nearly all cases significantly less than the rise shown in Table 2.9

The first point to emerge from Table 3.1 is a certain international convergence of the rates of increase in earnings over the period. In most countries, though not in all, the rates of increase accelerated between 1952-1958 and 1958-1965. But this acceleration was most marked where the increases in the earlier period were least.[5] Thus Italy had almost the smallest increase in earnings in 1952-1958, but the biggest acceleration. At the other extreme, France had the fastest increase in earnings in 1952-1958, but was the only country where the rate of increase was significantly less in the later period. Thus in 1958-1965, the rates of increase in all countries lay between just over 6 per cent (United Kingdom) and nearly 10 per cent (Italy). The most rapid accelerations in earnings — in Austria, Denmark, western Germany and Italy — were accompanied by substantial reductions in the level of unemployment (also shown in Table 3.1); these relationships between pay increases and unemployment will be examined in more detail below (section 3.2).

One result of this convergence in rates of increase in earnings, taken in conjunction with changes in the pattern of productivity gains, was a certain convergence in the rates of increase of unit labour costs (Table 3.2). In 1958-1965, a fairly close association (which was absent in the earlier period) appears between increases in average hourly earnings and increases in hourly output per worker.[6] The range of increases in unit labour costs was still fairly wide — from one-half per cent a year (Belgium) to 4 per cent (Denmark) — but these are the only countries falling outside the range of 1½ per cent (Netherlands, Norway) and just over 3 per cent (Finland, France, western Germany).

TABLE 3.2

Labour costs per unit of manufacturing output

Percentage increase over two periods (annual averages)

Country	Unit labour costs based on conventional rates		Unit labour cost based on earnings	
	1952-1958	1958-1965	1952-1958	1958-1965
Austria	—0.3	0.8	0.7	2.7
Belgium	. .	—0.2	2.6	0.4
Denmark	0.1	0.6	2.0	3.9
Finland	2.4	0.9	4.3	3.1
France	. .	. .	4.5	3.2
Western Germany .	1.0	1.6	1.8	3.2
Ireland	1.0	1.5	1.9	2.3
Italy	—2.1	1.3	—1.8	2.6
Netherlands . . .	2.7	—0.4	4.2	1.6
Norway	—1.5	—1.8	1.4	1.4
Sweden	—1.2	—1.7	1.6	2.0
Switzerland	. .	0.6	. .	2.4
United Kingdom .	2.9	0.7	3.6	2.3
United States . . .	. .	. .	1.2	—0.8

Sources: as for Table 3.1.

Two further questions may be put: how far are increases in labour costs associated with increases in conventional rates and how far with drift? Is there any clear difference between the experience of countries where collective bargaining is subject to a measure of central co-ordination and that of the countries where bargaining is wholly decentralized?

To assist comparison, the data in Tables 3.1 and 3.2 are used below to show the ranking order of western European countries in terms of changes in wages, productivity and labour costs.

In *1952-1958*, the countries with the smallest increases in unit labour costs, in terms of actual earnings, were Austria, Italy, Norway and Sweden (Switzerland might well fall into this group too, if figures of industrial output for the period were available). These countries were also the ones with the smallest increases in conventional rates in relation to their productivity gains. Indeed, if the increases in conventional rates had represented the whole increase in wages, unit labour costs would have fallen in all four countries. It is true that wage drift was substantial in Norway and Sweden — the only countries where drift was large in 1952-1958 — but their relative advantage in terms of rising unit labour costs was maintained in spite of drift.[7]

In 1952-1958, therefore, the relative advantages of slowly rising unit labour costs lay with three countries with a measure of central control of pay bargaining (Austria,[8] Norway and Sweden) and two countries (Italy and perhaps Switzerland) without it.

In the same period, the countries with the biggest increases in unit labour costs, in terms of earnings, were France, Finland, the Netherlands and the United

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(unit wage and salary costs, including allowance for self-employers, in whole economy); (*b*) the ranking of countries, in order of increases in unit labour costs on the two measures, is almost the same, with two significant exceptions: Norway (before 1958) shows a less than average rise by the restricted (Table 3.2) measure but an above average rise by the comprehensive (Table 2.9) measure; western Germany (since 1958) shows the reverse difference. There are similar small differences in the corresponding figures for manufacturing for the five countries for which separate data for manufacturing are shown in Chart 2.6.

[5] A rank correlation of +0.9 is found between the rates of increase in earnings in 1952-1958 and the acceleration of increases between that period and 1958-1965.

[6] In 1958-1965, the rank correlation between countries was 0.6 (from Table 3.1). In 1952-1958, there was no association.

[7] It should be pointed out that the normal system of wage adjustment in the Nordic countries is rather different from that used elsewhere. In the Nordic countries, an increase agreed by collective bargaining, whether an absolute amount or a percentage increase, is applied to the *actual earnings* being paid when the new agreement comes into effect. Elsewhere, the increase agreed by collective bargaining formally applies, as a rule, only to the conventional rate; how much actual earnings rise as a result depends on local and enterprise settlements and the effect may not be immediate. Drift is measured in this study by the difference between the percentage increase in the conventional rates and the percentage increase in actual earnings. Consequently a part of what is here described as "drift" in the figures for Nordic countries is in fact the agreed and understood result of the collective bargain. In this sense, the relative amount of drift in the Nordic countries is overstated, and the rise in conventional rates understated.

[8] Although the present system of co-ordinated bargaining in Austria was not instituted until 1957, there was a certain amount of co-ordination before (see Chapter 4, page 12).

Ranking of countries in respect of increases in industrial wages and unit labour costs

	Convent-ional rates	Earnings	Output per man-hour	Unit labour costs based on: Conven-tional rates	Unit labour costs based on: Earnings
	(1)	(2)	(3)	(4)	(5)
A. 1952-1958					
Austria	6	9	3	7	11
Belgium	..	8	9	..	5
Denmark	8	10	10	6	6
Finland	2	3	8	3	2
France	..	1	6	..	1
Western Germany	3	4	2	4	8
Ireland	7	11	11	5	7
Italy	5	12	1	8	12
Netherlands	1	2	7	2	3
Norway	10	7	5	10	10
Sweden	9	6	4	9	9
Switzerland	11	13	..	..	..
United Kingdom	4	5	12	1	4
B. 1958-1965					
Austria	3	4	4	5	5
Belgium	5	11	3	9	13
Denmark	8	3	8.5	7.5	1
Finland	7	6	8.5	4	4
France	..	7	11	..	2.5
Western Germany	2	2	5.5	1	2.5
Ireland	4	10	10	2	8.5
Italy	1	1	1	3	6
Netherlands	6	5	2	10	11
Norway	11	9	5.5	12	12
Sweden	12	8	7	11	10
Switzerland	9.5	12	12	7.5	7
United Kingdom	9.5	13	13	6	8.5

Source: Tables 3.1 and 3.2.

Kingdom. Again, these large increases were associated not with large amounts of drift but with large increases in conventional rates (but, as pointed out, there is no measure of the rise in conventional rates in France). Thus the largest rises in unit labour costs were experienced by two countries with central control (Finland and the Netherlands) and two (France and the United Kingdom) without it.

In *1958-1965*, the pattern is somewhat modified. Unit labour costs, in terms of earnings, rose least in Norway and Sweden (as in the earlier period) but now also in Belgium and the Netherlands. (The promotion of Belgium and the Netherlands into this category was the result partly of the marked acceleration in their rate of productivity gains, and partly of accelerating rates of increase in wages elsewhere; their own rates of wage increase did not slow down much.) In all four countries, the advantages of a relatively slow rise in unit labour costs were associated with relatively slow rises both in conventional rates and in earnings; although drift increased, it rose no more in these countries than elsewhere.

In 1958-1965, the biggest increases in unit labour costs were found in Denmark and, again, in Finland (both countries with a measure of central control of pay bargaining) and in France and western Germany. But in this period there were bigger rises in conventional rates, in relation to productivity, in Ireland and Italy than in Denmark; in Denmark, the big rise in unit labour costs in 1958-1965 was almost wholly the result of drift.

In contrast with most of western Europe stands the experience of the United States. Between 1952-1958 and 1958-1965 productivity gains accelerated while the rate of pay increases slowed down. In the earlier period, unit labour costs were rising — but less than in any western European country except Austria and Italy; in 1958-1965, unit labour costs were falling, while they were rising substantially in every country of western Europe.[9]

From these comparisons, limited as their significance must be, three conclusions emerge. First, central co-ordination of pay bargaining must not be written off as completely ineffective, by the test used here of relative increases in unit labour costs. The rise in labour costs was limited in Norway and Sweden in both periods, in Austria in the 1950s, and in the Netherlands since 1958 notwithstanding the big wage increases in the early 1960s and the erosion of wage controls. Against this must be set the very large increases in labour costs in the Netherlands in 1952-1958,[10] in Denmark since 1958 and in Finland in both periods. Secondly, such relative advantages as were gained by moderation in the rise of conventional rates were by no means wholly offset by exceptionally heavy drift (except in Denmark since 1958); in most countries the pattern of relative increases in earnings was dominated by the rate of increase in conventional rates. Thirdly, it is clear that easy conditions in the labour market — for example, heavy unemployment in Italy in the 1950s, and, probably, freedom of immigration in Switzerland — were equally effective as restraining influences on the rise of wages.

Thus central control over pay, judged by the experience of the last 10-15 years, appears as one way, but neither a certain way nor the only way, of relating pay increases to overall productivity gains.

3.2. THE STATISTICAL DETERMINANTS OF WAGE CHANGES[11]

No policy for *directly* influencing incomes in the short term could be effective if increases in labour costs and prices were simply and wholly the result of excess demand. In that case, the government could control income and price changes in the short term only by exercising its influence on the level of demand through fiscal and monetary policy. An "incomes policy", in the sense in which it is ordinarily understood, would have no separate part to play. This view is taken by some who have interpreted the process of inflation wholly in terms of "demand-pull". The attempt to influence incomes directly becomes useful only if a significant part of the changes in incomes is the result of other forces than changes in demand/supply relationships. These other forces — emphasized by "cost-push" or "institutional" explanations of the process of inflation — are essentially the result of particular arrangements for settling incomes, and of the attitudes, behaviour, expectations and reactions of the organizations and individuals concerned. The cost-push forces also include external variables such as changes in import prices; indeed, the fact that domestic wages can be seen to react to changes in the prices of imported materials, or food, itself demonstrates the implausibility of extreme demand-pull explanations.

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[9] For the United States, the wage bargaining system, being based largely on collective bargaining at the enterprise level, makes it impracticeable to calculate any index of conventional rates. The only figures compiled relate to actual earnings.

[10] The large increase in the Netherlands must be seen in relation to an earlier period of severe restraint (see Chapter 4, p. 2).

[11] Most of the data used in this section necessarily relate specifically to *wages* as distinct from wages and salaries.

The power of the "cost-push" or of "sellers'" inflation is sometimes attributed to the existence of monopoly or oligopoly among workers' organizations and managements, implying that this power would disappear in some state of pure competition. It seems more relevant, however, to emphasize the influence of customary patterns of behaviour and of expectations. Thus, a firm, even in completely competitive conditions, may safely raise prices in response to a rise in costs of labour or materials so long as it can reasonably expect its competitors to react to the cost increases in the same way. And a group of workers, whether organized as a union or not, may safely respond to a rise in consumer prices by seeking a wage increase so long as other groups are expected to do so too. These limitations of the influence of competition apply not only within a country, but also to the influence of international competition.

The vigorous controversy of the past ten years between proponents of the demand-pull and of the cost-push theories of inflation has given way to a certain reconciliation of views on the central issues. It is generally recognized that both types of influence are at work in most industrial countries even at one time, in different sectors.[12] Although, like so many controversies, it was in part an argument about the meaning of words, yet the issue is one of central importance for judging the likely effectiveness of different types of economic policy. It still remains desirable, for formulating policy, to assess in some way the relative weights of the demand and cost-push forces — a problem which has not yet been resolved.[13]

A number of efforts have been made, however, to identify statistically the quantitative importance of the various measurable factors involved in the rise of incomes — partly to throw light on the theoretical discussion, and on its implications for policy, by sorting out the process of causation, and partly for the improvement of short-term forecasting of wages and prices. From our point of view here, the interest in these empirical studies lies in what they show about the responsiveness of workers' pay to those factors which policy might be able to influence. It is realized, of course, that to show a significant influence of "cost-push", or institutional, or behavioural forces is a long way from showing how these forces can in practice be effectively modified by policy.

From such statistical investigations it is rarely possible to be completely confident of the direction of causality. The supposed causative variables are themselves closely inter-correlated in time, and between different branches of the economy. Hence to test a hypothesis about causation demands a longer period of observation, and a greater degree of precision in the data, than is usually possible, as well as a considerable refinement in statistical technique. In practice, statistical analysis may reveal only shades of difference between the plausibility of one hypothesis and that of another; their relative plausibility might easily be reversed by the use of alternative sets of data or alternative techniques. This difficulty applies particularly to the studies of the postwar period, which are the most relevant for our purpose; in none of them is the period studied much longer than ten or a dozen years, and the addition of another two or three years might substantially affect the results.

Efforts have been made by various analysts to associate statistically short-term (annual or quarterly) changes in wages with one or more of the following factors:

(1) *The demand for labour*. This may be measured by the level of *unemployment*, or by the level of *unfilled vacancies*, or by the gap between them or by changes in the level of employment; *labour turnover* has also been used as an indicator.

(2) Changes in *consumer prices* (either the official "cost-of-living" index, which is the statistical series often especially used in wage bargaining, or more comprehensive indices of consumer prices). To the extent that wage bargains incorporate escalation clauses based on the cost of living, the effect on wages is automatic.

(3) "*Ability to pay*" of employers. This may be reflected in the *rate of profits* (or changes in it); or, if explanation is sought by a cross-section analysis between industries, in the *degree of concentration*[14] (e.g. the proportion of sales accounted for by the largest firms), which may be taken to reflect ability to pass on wage increases into prices.

(4) Measures of *trade union pressure*. The only objective measure is the proportion of trade union membership, which may be used as an indicator of militancy or union activity. But more subjective measures of the apparent intensity of union pressure to raise wages have also been attempted.

(5) *Productivity* changes. Productivity changes could be expected to affect earnings directly, so far as earnings

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[12] For a general review and bibliography of the argument, see Bronfenbrenner and Holzman, "Survey of Inflation Theory" in *American Economic Review*, No. 4, September 1963. As an epigraph, they quote one synthetic view from Sir Dennis Robertson: "The economic stalactite of inflated demand has met a sociological stalagmite of upthrusting claims; and when stalactite and stalagmite meet and fuse in an icy kiss... nobody on earth can be quite sure where the one ends and the other begins."

[13] For some of the problems of distinguishing empirically between demand-pull and cost-push, see P. A. Samuelson and R. M. Solow, "Analytical Aspects of Anti-Inflation Policy" in *American Economic Review*, May 1960.

[14] Since statistics of the degree of concentration are usually compiled only at long intervals, this factor can in practice be assessed only by cross-section analysis.

CHART 3.1

Changes in hourly wage-earnings compared with unemployment and changes in consumer prices

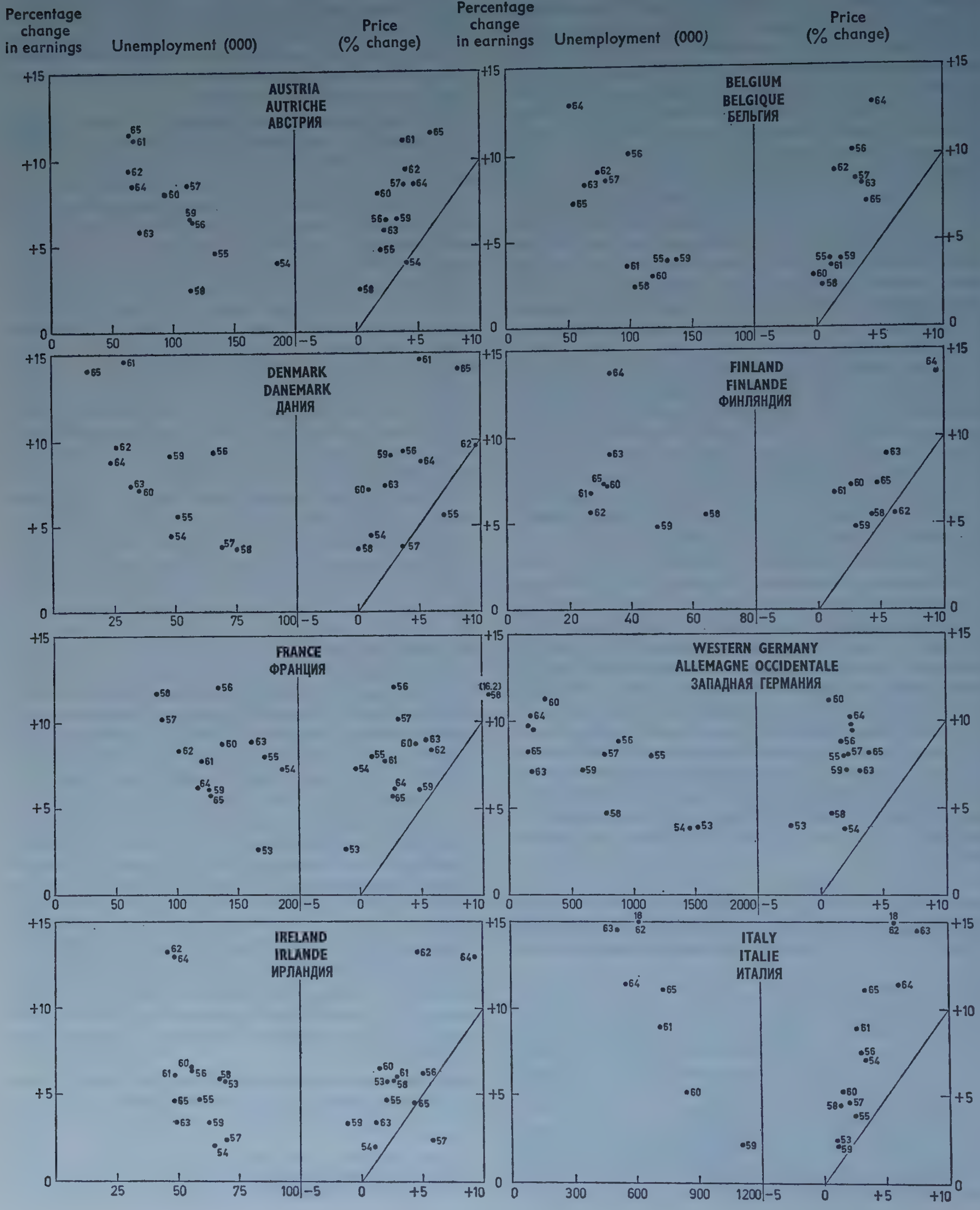
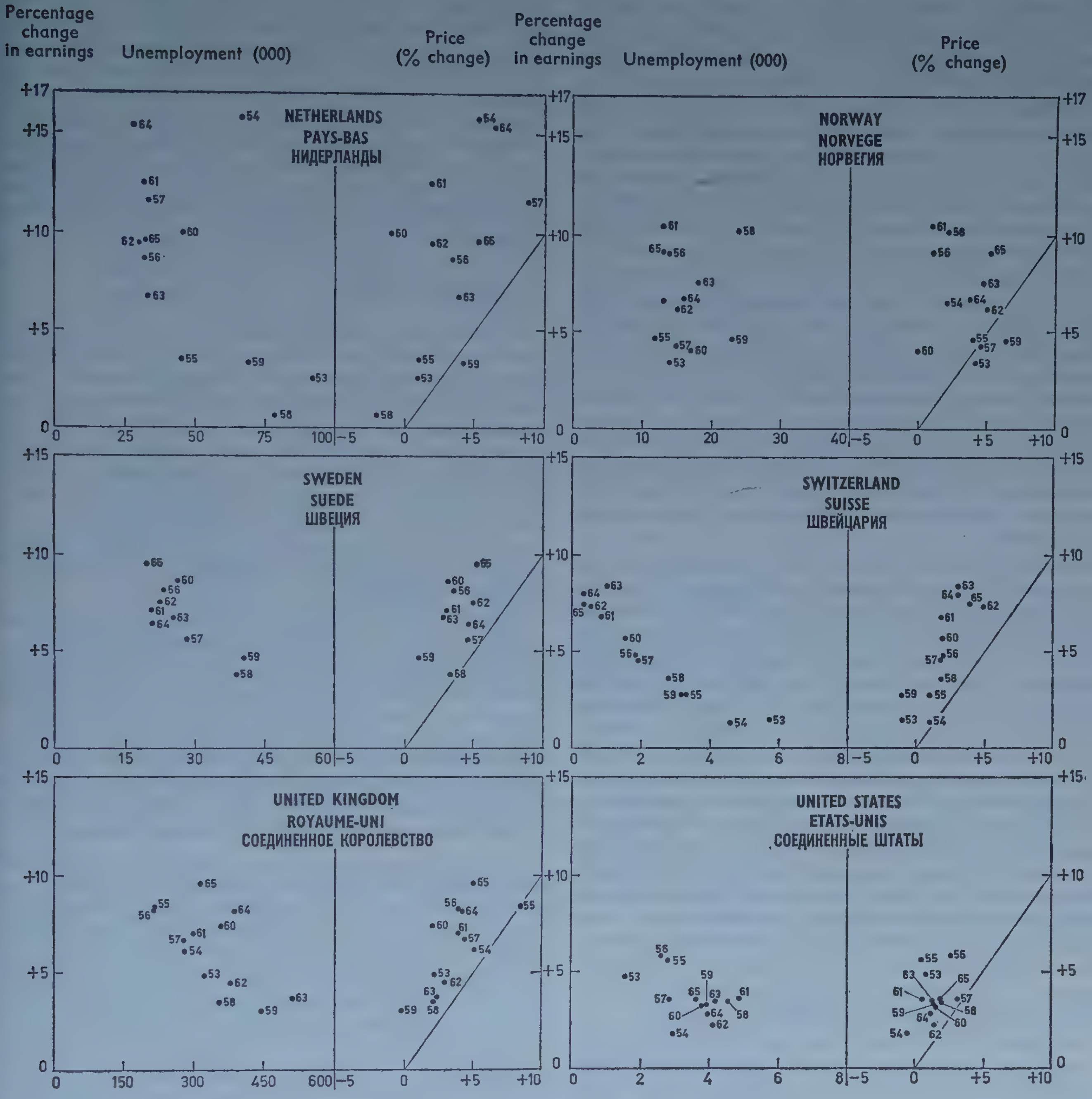


CHART 3.1 *(continued)*



USA only = 000,000

Source: Data used for Table 2.3.

depend on payments by results; but also indirectly, in so far as productivity changes reflect ability to pay or can be used to bargain for higher wages. It is to be expected that the latter effect would be a long-term one. Even in the short run, however, the cyclical behaviour of output per worker (that is, the lagged response of employment to output changes) might serve as an indicator of expectations about the trend of general activity, and thus influence wage bargaining.

(6) Changes in *output* or in *average hours* worked, reflecting changes in the general level of business activity. They would also directly affect earnings (though not negotiated rates) through variations in the amount of overtime, and could be regarded also as indirect reflections of changes in the demand for goods and services and therefore for labour.

(7) In addition, many of the empirical explanations have had recourse to the introduction of a *time trend.* It may indicate either (*a*) some general tendency for wages to increase over time, independently of changes in the specific variables considered;[15] or (*b*) a delayed reaction to the cumulative effect of one or more of the specified variables, operating over a longer period than has been identified in the statistical formulations. It cannot be asserted from the existence of a time trend in the equation that this time trend would continue if all the other variables took very different values over a long period.

Of these possible causes of wage increases, the first (demand for labour) and the sixth (changes in output or hours worked) are generally taken to reflect "demand-pull" influences. The other four (omitting the time trend) must be regarded principally, in the terminology of the arguments over inflation, as "cost-push" or institutional influences. But the distinction is by no means unambiguous. For example, the response of wages to "ability to pay" may be interpreted as the result of a general practice of passing on wage increases into prices; but equally a rise in profits may be regarded as the result of earlier demand changes. Similarly a rise in consumer prices may be pure "cost-push", if, for example, it is the result of a rise in import prices; but it may equally be the result of an earlier expansion of internal demand. The interaction of the different variables over a long period makes it impossible, in fact, to do more by empirical analysis than to seek to identify the *proximate* causes of wage movements or price movements; the ultimate origin may remain hidden.

All these variables have been used in the attempt to establish statistical explanations of wage changes. Most attention has been paid to the postwar years, but some investigations have gone back to the beginning of the century or beyond; these longer-run investigations have revealed distinct changes over the course of time in the degree of responsiveness to the determining variables. Detailed statistical analyses associating wage changes with the variables listed above have been made for only a few countries: several studies have been made for both the United Kingdom and the United States, and individual studies for Finland, Ireland, western Germany, the Netherlands and Canada. These studies are summarized in the Appendix to this chapter (page 28) and the statistical results of some of them are summarized in Table 3.5. They are mainly "macro economic" in the sense that they are concerned chiefly with the movement of average wages in industry (or the economy) as a whole, rather than with the factors determining relative wages in different branches or occupations. It will be seen from the Appendix that a considerable variety of statistical explanations for wage changes has been offered.

A comparative analysis of wage determination

In the hope of throwing some light on the comparative experience of different countries, we have attempted to measure, in a uniform and simple way, the association between (*a*) rates of wage changes in western European countries and the United States, and (*b*) their levels of unemployment and rates of change in consumer prices. These are the two variables most commonly found to afford reasonably satisfactory "explanations" of wage changes in the more thorough studies of individual countries summarized in Appendix 3.I; they are also the two variables for which fairly comparable data can be obtained for most countries.[16]

Chart 3.1 shows for several countries scatter diagrams relating the annual increase in industrial wage earnings between 1952 and 1965 (*a*) to the change in consumer prices, and (*b*) to the level of unemployment. The wage changes are percentage changes in industrial wage-earnings per hour, generally from the fourth quarter of one year to that of the next. Price changes are similarly measured, the change covering the same interval. Unemployment is measured by the average numbers unemployed in the four quarters covered by the wage change.

The right-hand panel of each diagram, showing earnings against price changes, reveals little beyond the obvious facts that wages and prices have both increased in nearly every year in nearly every country during the period of observation, and that wages have almost always risen faster than prices; only a few cases can be found of a fall in real wage-earnings in any year (where the observation falls below the 45 degree line). These examples of a decline in real wages include France in 1958 (the year of devaluation) and Norway in three of the "inter-contract" years when there was no new central agreement.

A broad relationship between the level of unemployment and the rate of change in wage-earnings is also evident, from the left-hand side of each diagram, for most of the countries. But for some, the relationship is hardly perceptible. Thus in France, Norway and the United States the rates of increase of earnings appear at first sight to be almost independent of the level of unemployment.

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[15] The time trend would also incorporate the effect of various long-term structural changes, such as the shift towards higher-paid branches of industry or occupations. A factor of possible significance is the relative growth of "non-manual" employment. Although most analyses are confined to manual workers' pay, yet the increasing relative importance of better paid non-manual occupations may exercise a certain pull on wages.

[16] If better statistics for *profits* had been available for more countries, profits would also have been tested as an explanatory variable. Some of the studies referred to in the Appendix, especially in the United States, have found significant associations between profits and wages.

To analyse the combined relationship between price changes and unemployment on the one hand, and the rate of increase in both wage-earnings and conventional rates on the other, multiple regressions have been calculated. The basic data are the same as those used in Chart 3.1.[17] The equations are calculated by ordinary least squares and take the simple linear form:

$\Delta W = a + bU + c\Delta P$

ΔW = average hourly wage-earnings, and also conventional hourly rates, when available, in the fourth quarter of each year (or as near a substitute as the data allow), expressed as a percentage change over the corresponding period of the year before,

a = a constant,

U = unemployment, in thousands, for the average of the four quarters preceding each wage observation,

P = consumer prices, for the same quarter (or month) as the wage observation, expressed as a percentage change over the corresponding period of the previous year,

b and c are coefficients expressing the proportionate change in wages associated with, respectively, the number unemployed and a percentage change in consumer prices.

The resulting equations for each country are shown in Table 3.3. Chart 3.2 compares, for each country, the annual changes in wages calculated from the equations with the changes that in fact occurred.

A general conformity in most countries between wage changes and the combined effect of the two independent variables, unemployment and retail price changes, appears from Chart 3.2. The conformity is apparent both for wage rates (where these can be given) and for actual earnings.

At the same time, it is very clear that the relationships are far from stable. Table 3.3 shows the values of the coefficients for the independent variables. It also shows, first, that the standard deviations of the coefficients are often very high (in several cases, exceeding the values of the coefficients). Secondly (as can be seen from the values for R^2) the proportion of the year-to-year wage changes "explained" by variations in unemployment and prices is often rather small. In Austria (for earnings) and Switzerland (for earnings and rates) the equation explains 80-90 per cent of the variation in the rate of wage change, and in the United Kingdom (for wage rates) nearly three-quarters. But in all other cases, the equations in this simple form offer much less complete explanations. Consequently, the precision of any one-year forecast of wage changes that might be made on the basis of the equations, as the standard errors of estimate show, is generally not high.

No doubt, the precision of the equations could be improved by different specifications: for example, different time lags might produce better statistical results for some countries; or alternative indicators (e.g. unfilled vacancies in place of unemployment) might prove more satisfactory in some cases; or the influence of the time trend in unemployment, which is important in several countries, might have been removed. Such improvements might well have produced better results, yielding a differently specified equation for each country. All that has been attempted here is an experiment with a simple and uniform equation for all countries.

For some countries, the instability of the year-to-year relationships can be attributed to special features of pay bargaining. Thus in *Ireland*, where bargaining has been decentralized, there has been a marked tendency towards a two- or three-year cycle of "wage rounds", reflected too in actual earnings (see Chapter 4, page 28). In *Norway* (for which the equations offer a particularly poor explanation of year-to-year changes, none of the coefficients being significant), the alternation of large and small increases again reflects simply the conclusion of new wage contracts.[18] To the effects of each new contract is added a rate of drift, which is fairly stable though to some extent dependent on variations in labour demand.[19] Chart 3.2, however, suggests some association between the rates of increases in wages in the years when new contracts were made, and the movement of prices and unemployment in that year.[20]

For the *Netherlands*, the greater "jerkiness" in actual wage movement than in the calculated curves is partly the result of policy, operated through the centralized bargaining system. Thus the very large wage increase in 1954 represented government acceptance — for the first time after the war — of the desirability of a significant rise in *real* wages (see Chapter 4, page 3), followed by almost no increase in the next year. The alternation of large and small increases from 1960 onwards, with much wider fluctuations than the associated variation in unem-

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[17] All the figures for wages relate to a quarter, or a month (or one week in a month); this is considered preferable for the present purpose to annual averages, which tend to mask the timing of fluctuations, but which have been used for the general conspectus of pay changes in Tables 3.1 and 3.2. It is recognized, however, that figures for an individual week, or month, may be arbitrarily influenced by the timing of important settlements. This may increase the instability of the coefficients.

[18] Oddly, the coefficient for prices in Norway has the wrong sign (although hardly greater than its standard deviation). Variations in unemployment have been very small; the peaks in actual wage increases in the 1950s coincide with those calculated from the equation because the years in which new contracts were made followed periods of relatively small increases in prices (possibly because of the absence of increases in conventional rates in the inter-contract years). This rather paradoxical association of big wage increases with small price increases is thus a consequence of the system of two or three year agreements, combined with the practice of using price subsidies to restrain the escalatory effects on wages of increases in the cost of living. In the 1960s, when the agreements provided for further increases in subsequent years of the contract, no such association appears.

[19] For a fuller discussion of drift, see section 3.3, page 18.

[20] Employment and unfilled vacancies are alternative indicators of labour market conditions but were not found to give better results than unemployment.

Chart 3.2

Changes in industrial wage-earnings and in conventional wage-rates (per hour) compared with changes calculated from regressions of wages on employment and consumer prices

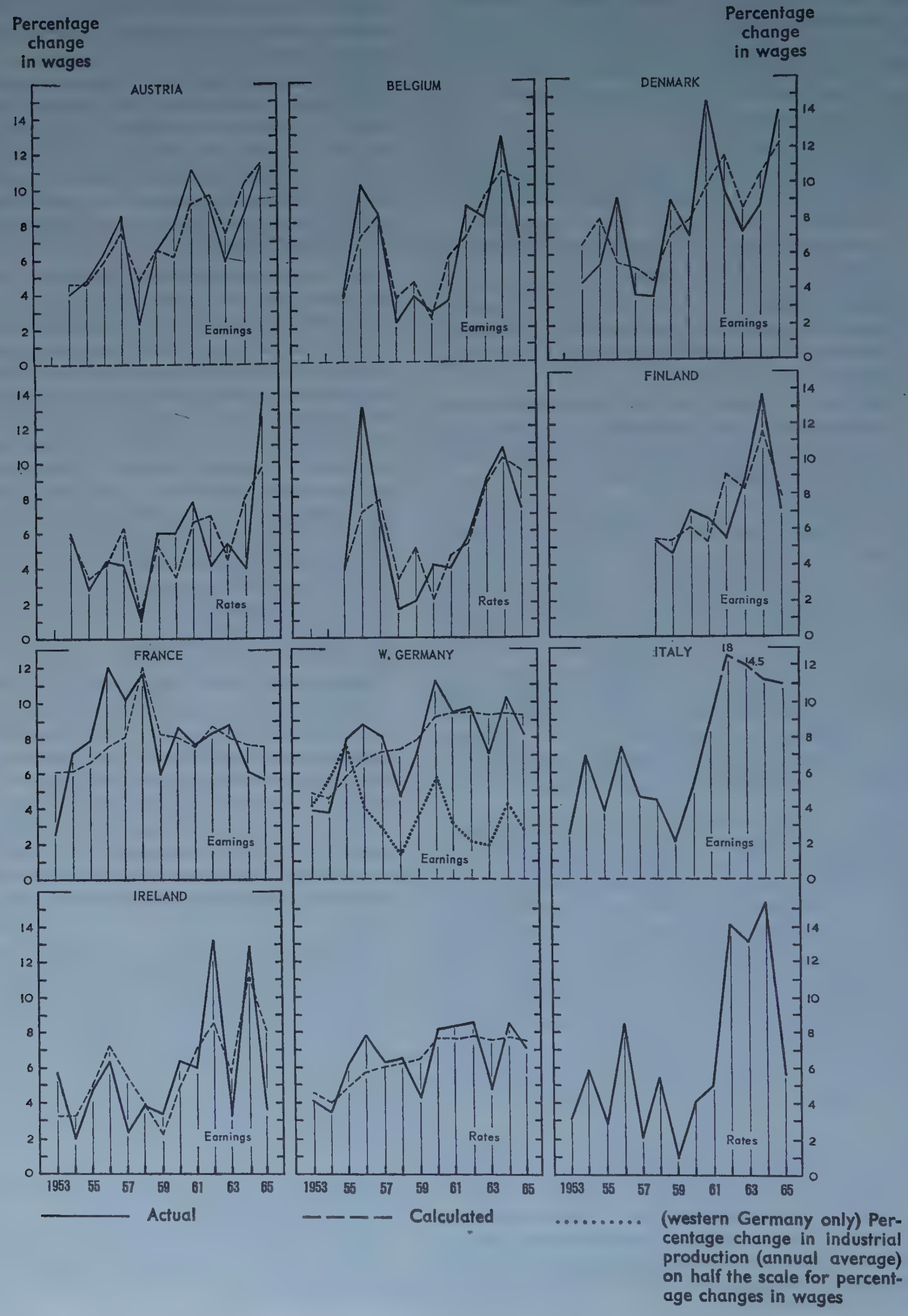
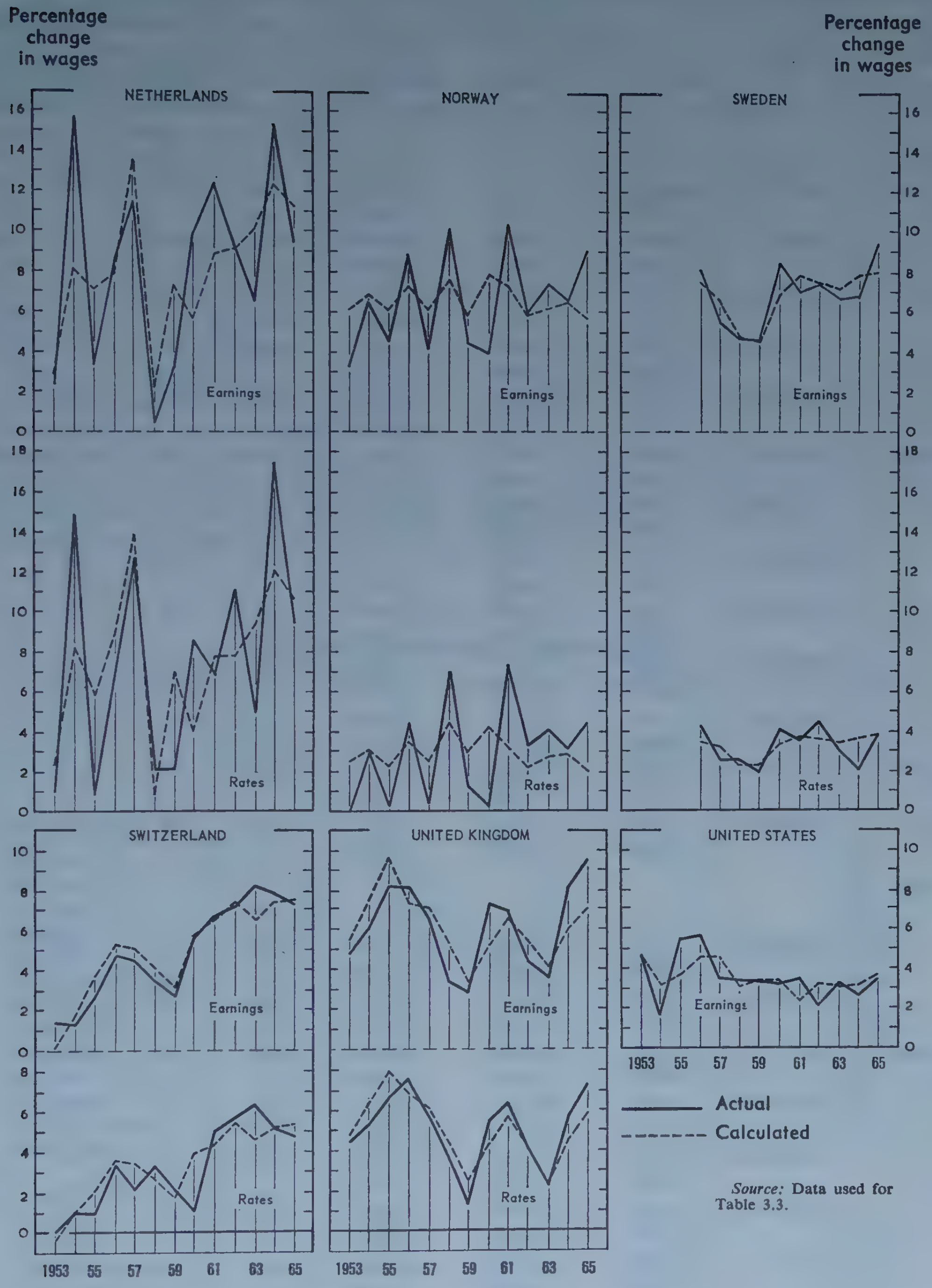


CHART 3.2 *(continued)*



Source: Data used for Table 3.3.

TABLE 3.3

Wage-determination equations for western European countries and the United States

Coefficients of variables determining the annual percentage increase in hourly earnings or conventional wage-rates in industry

Country	Years	Coefficients			R^2	Average values for period of observation			Standard error of estimate [a]
		Constant term	Unemployment	Retail prices		percentage increase in wages	thousand unemployed	percentage increase in prices	
A. Wage-earnings									
Austria	1953-1965	8.26 (0.39)	− 0.04 (0.01)	+ 1.01 (0.27)	0.80	7.3	101	3.2	0.19
Belgium	1954-1965	7.05 (0.64)	− 0.04 (0.04)	+ 1.32 (0.66)	0.70	6.5	91	2.1	0.33
Denmark	1953-1965	11.35 (0.76)	− 0.11 (0.05)	+ 0.30 (0.32)	0.54	8.0	43	4.1	0.34
Finland	1957-1965	6.00 (0.74)	− 0.06 (0.06)	+ 0.79 (0.31)	0.61	7.4	37	4.5	0.28
France	1952-1965	8.02 (0.64)	− 0.01 (0.03)	+ 0.30 (0.21)	0.34	7.9	132	3.8	0.32
Western Germany .	1952-1965	10.35 (0.44)	− 0.004 (0.001)	− 0.11 (0.39)	0.63	7.7	639	1.9	0.20
Ireland	1952-1965	12.96 (0.77)	− 0.16 (0.10)	+ 0.63 (0.33)	0.49	5.8	57	3.1	0.47
Netherlands . . .	1952-1965	8.32 (1.02)	− 0.06 (0.05)	+ 0.79 (0.39)	0.48	7.9	47	3.1	0.47
Norway	1952-1965	6.79 (0.69)	+ 0.08 (0.19)	− 0.43 (0.38)	0.12	6.6	16	3.4	0.38
Sweden	1955-1965	11.66 (0.90)	− 0.17 (0.17)	− 0.04 (1.02)	0.64	6.9	27	3.6	0.16
Switzerland	1952-1965	7.29 (0.24)	− 1.24 (0.25)	+ 0.15 (0.26)	0.90	4.9	2	1.8	0.17
United Kingdom .	1952-1965	6.98 (0.44)	− 0.008 (0.008)	+ 0.51 (0.31)	0.55	6.2	337	3.5	0.26
United States . . .	1952-1965	5.36 (0.29)	− 0.65 (0.32)	+ 0.34 (0.32)	0.34	3.5	3.5 [b]	1.4	0.29
B. Conventional wage rates									
Austria	1953-1965	2.37 (0.73)	− 0.01 (0.02)	+ 1.35 (0.51)	0.49	5.5	101	3.2	0.46
Belgium	1954-1965	4.44 (0.81)	− 0.02 (0.04)	+ 1.52 (0.83)	0.55	6.2	91	2.1	0.44
Western Germany .	1952-1965	8.76 (0.31)	− 0.003 (0.001)	− 0.19 (0.28)	0.55	6.5	639	1.9	0.17
Netherlands . . .	1952-1965	2.22 (1.23)	+ 0.02 (0.07)	+ 1.09 (0.47)	0.36	6.7	47	3.1	0.66
Norway	1952-1965	2.15 (0.71)	+ 0.14 (0.21)	− 0.42 (0.39)	0.13	3.0	16	3.4	0.86
Sweden	1955-1965	5.07 (0.27)	− 0.07 (0.05)	+ 0.01 (0.31)	0.32	3.3	27	3.6	0.27
Switzerland	1952-1965	4.79 (0.24)	− 0.88 (0.26)	+ 0.22 (0.26)	0.84	3.3	2	1.8	0.27
United Kingdom .	1952-1965	8.82 (0.29)	− 0.014 (0.005)	+ 0.26 (0.20)	0.73	5.1	337	3.5	0.21

Sources: As for Appendix Table 3.I. Equations derived by ordinary least squares linear regressions. Standard deviations of coefficients are given in brackets.

[a] Standard error of the differences between the calculated and actual values of annual increases in wages, expressed as a ratio of the average actual increase.

[b] Million unemployed.

The variables are:

Average earnings and rates: Percentage increase between fourth quarters (or nearest available date) of successive years.
Unemployment: Number unemployed in thousands (millions for United States).
Prices: Same as for earnings.

ployment and prices, seems to reflect a periodical concentration of union bargaining efforts — either to catch up, or to anticipate, changes in the underlying economic conditions.

For *western Germany*, the year-to-year association of wage changes with unemployment and prices, as is evident from Chart 3.2, is weak (the coefficient for unemployment is significant, but not that for prices). The general trends of the calculated and actual curves are similar — accelerating wage increases, associated with a falling trend in unemployment, up to 1960, and relative stability in both series thereafter. But the year-to-year changes in wages, which are much more violent than the calculated changes, are not well explained (R^2 is only 0.6). They seem to be more closely associated with changes in the rate of growth of industrial production (included, for western Germany, on the chart); industrial production can be taken as a more sensitive indicator of cyclical conditions than unemployment.

For *France* again, the equations do not account satisfactorily for the variations in wage movements. The unemployment statistics are of doubtful value as guides to the demand for labour, and the variations in the rate of price increase may be more important. Wage increases in 1954-1957 were much larger than can be explained by the equation; in 1959 and again in 1964-1965 they were significantly smaller. These deviations might possibly be accounted for by more sensitive indicators of "cyclical conditions".[21]

For *Italy*, no equation has been calculated, because of the absence of a reliable unemployment series for the earlier part of the period. The general trend of unemployment was, of course, declining throughout the 1950s, but there was no acceleration in the rate of wage increase (actual increases in earnings are shown in Chart 3.2). The acceleration of wage increases came only after 1960 when unemployment had sunk to a relatively low level, and fell away with the stabilization measures (and resulting increase in unemployment) in 1965. It seems clear that the rather sudden transformation of the labour market in Italy has masked the relatively small effects of short-period fluctuations — which may now, however, become more important.

The influence of unemployment

The comparative influence of unemployment on wage changes is not easily seen from the coefficients of the

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[21] A study on a branch-by-branch basis for France reveals considerable difficulties in explaining with any precision the developments of short-period variations in wages (J. Silvestre, "Les comportements cycliques de hausses de salaires", *Revue d'économie politique 1966*, No. 2).

TABLE 3.4

Wage determination equations compared

Country	(1) Wage increase per cent per year	(2) Average unemployment per cent	(3) Consumer price increase per cent per year	(4) Wage response to 1 per cent fall in unemployment per cent	(5) Wage response to 1 per cent rise in consumer prices per cent
A. Wage-earnings					
Austria	7.3	4.2 H	3.2	+ 1.0 L	+ 1.0 H
Belgium	6.5	2.9 H	2.1	+ 1.1 L	+ 1.3 H
Denmark	8.0	2.5 H	4.1	+ 1.8 H	+ 0.3 L
Finland	7.4	2.0 H	4.5	+ 1.1 L	+ 0.8 H
France	7.9	0.9 L	3.8	+ 1.4 H	+ 0.3 L
Western Germany.	7.7	4.6 H	1.9	+ 0.5 L	(— 0.1) L
Ireland	5.8	8.1 H	3.1	+ 1.1 L	+ 0.6 H
Netherlands . . .	7.9	1.3 L	3.1	+ 2.2 H	+ 0.8 H
Norway	6.6	1.5 L	3.4	(—0.8) L	(— 0.4) L
Sweden	6.9	0.9 L	3.6	+ 5.4 H	0.0 L
Switzerland . . .	4.9	0.1 L	1.8	+ 26.8 H	+ 0.2 L
United Kingdom .	6.2	1.5 L	3.5	+ 1.8 H	+ 0.5 H
United States . .	3.5	6.0 H	1.4	+ 0.4 L	+ 0.3 L
B. Wage rates					
Austria	5.5	4.2 H	3.2	+ 0.3 L	+ 1.4 H
Belgium	6.2	2.9 H	2.1	+ 0.5 H	+ 1.5 H
Western Germany	6.5	4.6 H	1.9	+ 0.4 L	(— 0.2) L
Netherlands . . .	6.7	1.3 L	3.1	(— 0.8) L	+ 1.1 H
Norway	3.0	1.5 L	3.4	(— 1.6) L	(— 0.4) L
Sweden	3.3	0.9 L	3.6	+ 2.1 H	0.0 L
Switzerland . . .	3.3	0.1 L	1.8	+ 19.0 H	+ 0.2 L
United Kingdom .	5.1	1.5 L	3.5	+ 3.1 H	+ 0.3 H

H (high) and L (low) show relationship to the median for the western European countries shown.

Col. (2) Average unemployment: High = 2.0 and over.

Col. (4) Wage response to unemployment: High = 1.4 and over for earnings.
0.5 or over for rates.

Col. (5) Wage response to prices: High = 0.5 and over for earnings.
0.3 and over for rates.

Source: Table 3.3.

unemployment variable in the equations in Table 3.3; the variable represents differences in unemployment measured in thousands. A very rough comparison is, however, attempted in Table 3.4, where the equations are adapted to show the calculated effects on wages of a change in unemployment by 1 per cent of the labour force (assuming no change in prices). The average level of unemployment, as a percentage of the non-agricultural labour force, over the whole period 1952-1962 is also shown.[22] Because of the very different ways in which unemployment is measured in different countries, it cannot be assumed that the resulting figures are more than very roughly comparable between countries. However, the relative rates of unemployment are probably comparable enough to allow the countries to be classified into two groups — those where the unemployment percentage was higher than average over the sample period as a whole, and those where it was lower (taking as the "average" the median for the countries shown). The countries can similarly be divided into two groups according to the calculated degree of sensitivity of wages to 1 per cent changes in the unemployment level. The results, for wage-earnings, may be summarized as follows:[23]

"High" unemployment and low sensitivity of earnings to unemployment: Austria, Belgium, Finland, western Germany, Ireland, United States.

"Low" unemployment and high sensitivity: Netherlands, Sweden, Switzerland, United Kingdom.

High unemployment and high sensitivity: Denmark.[24]

Low unemployment and no satisfactory measure of sensitivity: France, Norway.

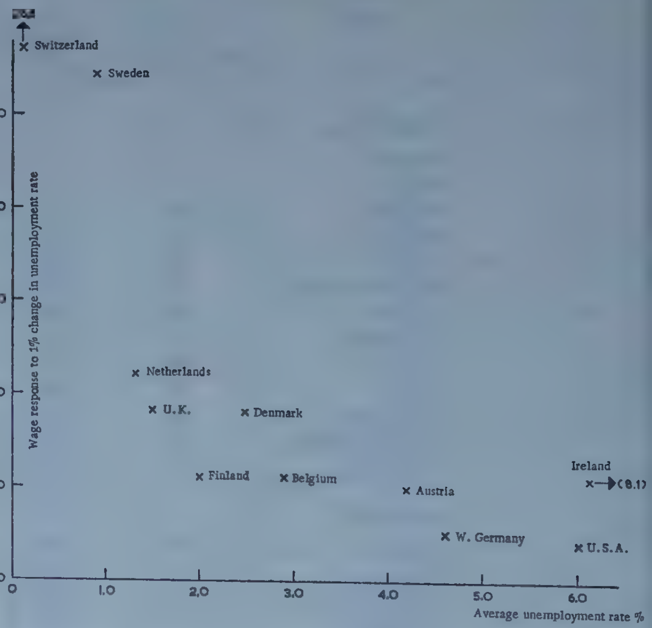
The general inverse association between the level of unemployment and the sensitivity of wages to unemployment is supported by the more intensive investigations made by other authors for certain countries (summarized in the Appendix to this Chapter and in Table 3.5).[25] Although the methods of calculation and results differ substantially among themselves, yet these investigations agree in demonstrating a higher sensitivity of wages to unemployment in Britain and the Netherlands than in the United States or Canada.

This comparison between countries supports the view that the relation between the unemployment level and wage changes is non-linear: that the proportionate response of wages is greater when unemployment is low than when it is high. This non-linearity appears from some of the investigations of time series; e.g. for Britain (Phillips), for the United States (Perry), the Netherlands (Verdoorn and Post) and Canada (Vanderkamp).[26] Thus a given change in unemployment (in terms of a given proportion of the labour force) appears to exercise a bigger influence on wages both *when* unemployment is low and *where* unemployment is low (see Chart 3.3).[27]

It should be noted that in these equations the *level* of unemployment is taken as the independent variable, rather than *changes* in unemployment. Generally, the implication is that a shift to a lower level of unemployment would add to the rate of wage increase so long as unemployment remains at the new level. But where the level of unemployment was greatly reduced between different periods, the influence on the rate of wage

CHART 3.3

Wage response to unemployment compared with rate of unemployment



Source: Table 3.4. France and Norway omitted because of weakness of the equations.

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[22] For this purpose the recorded numbers unemployed are expressed as percentages of the total number of wage- and salary-earners in the labour force, excluding agriculture. The results of the sample labour force surveys conducted in 1960 in the six Common Market countries include broadly comparable figures for unemployment in each of these countries. (See EEC "Statistical Information" 1963, No. 2 bis.) These are compared with the regular official statistics of unemployment in "International Unemployment Rates 1960-1964", *United States Monthly Labor Review*, March 1965. The most significant differences are (*a*) for France, where the sample survey showed a level of "unemployment", as defined by the survey, over twice as great as the regular figures of "registered applicants for work" (approaching half of the number recorded as unemployed in the sample survey not having been previously employed); (*b*) for western Germany, where the sample survey showed only half as great a level of "unemployment" as the regular official figures of "registered unemployed". It cannot be assumed, however, that these relationships between the official figures and the numbers unemployed according to the sample survey concept would hold over the whole 1952-1965 period.

[23] When the same comparison is applied to the equations for conventional rates, much the same results appear; but the inverse association is slightly weakened (Belgium shows both high unemployment and high sensitivity, while the Netherlands shows low unemployment and low sensitivity).

[24] The estimate of the unemployment percentage for Denmark is particularly uncertain.

[25] The table does not cover all the studies described in Appendix 3.I, but only those giving prominence to unemployment and/or consumer prices as determinant variables.

[26] The references are given in full in the Appendix (page 28).

[27] This suggests that the equations might have been improved if the unemployment variable had been expressed logarithmically.

ncrease may not be long-lasting. In such cases, the equation does not necessarily "predict" that if unemployment remains at the new level (and other things eing equal) wages will continue to rise at the same rate ndefinitely.

The influence of prices

If we can consider the rise in prices as itself a determinant of the rise in wage-earnings, then the rise n prices appears as a major element behind the rise in earnings in Austria, Belgium, Finland, Ireland, and the United Kingdom; this is because earnings in these countries appear fairly sensitive to price rises, rather than because the rise in prices was itself exceptionally large (Table 3.4). But in the remaining countries, earnings appear to have been much less sensitive to price increases; in Belgium, western Germany and Switzerland, and also in the United States, but not in Denmark, France, the Netherlands, Norway or Sweden, the rise in prices was also exceptionally small. Thus sensitivity of wage change to price change varies con-

TABLE 3.5

Results of equations relating wage increases to unemployment and consumer prices

Source [*]	Dependent variable [b]	Sample period	Constant and/or time trend	Calculated net effect on rate of wage increase of —		Other variables regarded as significant
				Reduction in unemployment by 1 per cent of labour force [a]	1 per cent increase in consumer prices [a]	
United Kingdom						
1. Phillips 1958	weekly wage rates A	1861-1913	—	3 [c]	—	exceptional changes in prices
2. Lipsey 1960	weekly wage rates A	1923-1939 and 1948-1957	—	not significant	0.4 to 0.7 [d]	
3. Dicks-Mireaux and Dow 1959 .	weekly wage rates Q	1946-1956	2 — 2 ½	3 ½	0.5	trade union "pushfulness"
4. Klein and Ball 1959	weekly wage rates	1948-1956	5.6	5	0.9	trade union "pushfulness" (zero before, and 1 after, 1952)
5. Dicks-Mireaux 1961	average wage/salary annual A	1946-1959	4	2 3/4	0.5	
6. Tables 3.3 and 3.4 Earnings	hourly wage earnings Q	1952-1965	7.0	1.8	0.5	
Rates	hourly rates Q	1952-1965	8.8	3.1	0.3	
United States						
1. Eckstein and Wilson 1962 . .	earnings [f] in "key industries" [g] Q	1948-1950	—	0.6	not significant [e]	profits (1 % rise in rate of profit = 0.7 % rise in wages)
2. Perry 1964	earnings [f] Q	1947-1960	—	1 [h]	0.5	profits (1 % rise in rate of profit, at sample period mean of profits and unemployment, = under 1 % wage rise)
3. Klein and Bodkin 1964	earnings A	1900-1957	2	about 1	0.5	profits found not significant
4. Schultze and Tryon 1965 . . .	hourly earnings Q	1950-1960	—	about 1 [j]	0.7 to 0.9 [i]	profits, previous year's wage change
5. Survey of Current Business 1966	annual earnings Q	1953-1964	—	. .	0.9	profits, previous year's wage change
6. Tables 3.3 and 3.4	hourly earnings Q	1952-1965	5	0.4	0.3	

TABLE 3.5 *(continued)*

Source *	Dependent variable [b]	Sample period	Constant and/or time trend	Calculated net effect on rate of wage increase of — Reduction in unemployment by 1 per cent of labour force [a]	Calculated net effect on rate of wage increase of — 1 per cent increase in consumer prices [a]	Other variables regarded as significant
Netherlands						
1. Verdoorn and Post (1964) . . .	annual average wage increase A	1923-1928 and 1949-1960 [k]	0.5	2 [l]	0.4	wage change in previous year; productivity
2. Tables 3.4 and 3.5	hourly earnings Q	1952-1965	8.3	2.2	0.8	
Ireland						
1. OHerlihy 1966	hourly earnings A	1949-1963	—	2.5	0.7	presence of "wage round" (roughly every second year) adds about 1 %
2. Tables 3.4 and 3.5	hourly earnings	1952-1965		1.1	0.6	
Canada						
Vanderkamp 1966	earnings [m] Q	1947-1962	—	0.5 [n]	0.7	productivity (1 % rise in output per worker gives 0.5 % rise in earnings)

[a] Assuming no change in other variables. These measures are very rough. Where the dependent variable in the original equation is measured in terms of an index number or absolute amounts, the effect is converted to a percentage related to the average level of the variable during the sample period.

[b] A = annual averages. Q = annual rate of change on quarterly (or more frequent) data.

[c] Unemployment falling from 3 to 2 per cent = 2 per cent wage increase (approximately)
Unemployment falling from $2\frac{1}{2}$ to $1\frac{1}{2}$ per cent = 3 per cent wage increase (approximately)
Unemployment falling from 2 to 1 per cent = 6 per cent wage increase (approximately).

[d] 0.7 from single equation least squares. But Lipsey suggests bias of 0.2 to 0.3 due to interdependence of prices and wages.

[e] Except for 1950-1951 period of rapid price increase.

[f] Straight-time hourly earnings (i.e. excluding overtime).

[g] Nine "key bargains". For other industries, the main determinant in wage changes was the wage change in the key bargains.

[h] Relationship with rate of unemployment (and with rates of profits) curvilinear. Fall of unemployment from 5 per cent to 4 per cent (actual average in sample period was 4.7 per cent) with profits at sample period average, would give extra wage rise of up to 1 per cent.

[i] Possibility recognized of upward bias through interdependence of wage and price changes.

[j] For average of durable and non-durable manufacturing with unemployment rate between 2 and 4 per cent.

[k] For current use, the pre-war equations are given a half weight.

[l] With unemployment at the 2 per cent rate experienced in the 1950s; the relationship is non-linear. At lower rates of unemployment (around 1 per cent) the associated wage change is $2\frac{1}{2}$ to $3\frac{1}{2}$ per cent.

[m] For "organized" sector only.

[n] With unemployment changing from 4 to 3 per cent (average of sample period was 3.3 per cent). Relationship non-linear; effect of fall from 3 to 2 per cent would be over 1 per cent.

* Full references are given in the Appendix to Chapter 3 (page 28).

siderably between countries, but is not closely related to the rate at which prices themselves rise.

One point should, however, be noted about the price coefficients in these equations. There is obviously a double interaction between wages and prices: prices may push up wages, but so may wages push up prices, within the same year. The chain of causation is no doubt complex. Thus it may be that the true independent causative factors are unemployment and "external" forces (such as import prices, or indirect taxes, or agricultural prices) affecting consumer prices. They influence wages which in turn have a further influence on prices.[28]

Apart from these statistical difficulties, the interpretation of the association between changes in consumer prices and in wages is necessarily a doubtful one. In practice, there is no doubt that a rise in the cost of living is commonly regarded, by trade unions, employers and arbitration committees alike, as justifying a rise in money wages; yet a change in consumer prices has no effect on the bargaining power of the parties except in the rather formalistic sense that it can be said to affect the supply price of labour. In some countries, notably in Italy, the high sensitivity of wages to price movements may be due to the widespread use of automatic cost-of-living escalator clauses. At the same time, price changes will also frequently reflect a change in overall profit margins, and may thus indicate a change in the "ability to pay" of employers generally. Several of the American studies of wage determination, and also Helelä's study for Finland, show changes in profits as a significant determining variable.[29] On the other hand, studies in the United

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[28] Some authors who have attempted a simultaneous wage and price model have been able to eliminate this bias, at least in part, by using the two-stage least squares method developed by Theil, or other methods. One result has often been to reduce the price coefficient in the wage determination equation. See, for example, Dicks-Mireaux (1961); Klein and Ball (1959); OHerlihy (1966); Lipsey (1960).

[29] See Appendix 3.I. Thus Eckstein and Wilson found that although consumer prices as a determining variable gave a less satisfactory fit than profits, yet the collinearity between prices and profits was high.

Kingdom have found the statistical influence of profits omewhat weak.[30]

This contrast may reflect a difference in bargaining methods. The practice of American unions in attacking a single (and conspicuously profitable) firm may result n a closer correlation between profit changes and wage changes than would apply when the major wage changes pring from industry agreements. Where bargaining is based on the branch of industry, any connexion that xists between the profit level and the outcome of the bargaining process is likely to be somewhat muted, while he more obvious evidence of the cost-of-living index (affected of course by many other factors than the level of profits) will play a larger part in the settlement of wage demands.

Conventional rates and earnings

It is often suggested that, even if collective bargaining fails to respond to market forces, actual earnings will do so because of drift. One test of this hypothesis may be made from the equations; the hypothesis implies that earnings would be more responsive than conventional rates to the unemployment level. This appears to be so (see Table 3.4) in Austria, Belgium, western Germany, the Netherlands (where the coefficient for the association between unemployment and conventional rates takes the wrong sign), Sweden and Switzerland. In Austria, Belgium and the Netherlands, too, conventional rates are more responsive to price changes than are earnings — a natural result in the light of the importance of cost-of-living changes in collective bargaining. In Switzerland, rates and earnings show equal response to prices. In western Germany, Norway and Sweden, the price coefficients, both for rates and earnings, are negligible (or take the wrong sign). The only other country for which data for both rates and earnings are available is the United Kingdom, where, contrary to the hypothesis, conventional rates respond more strongly to unemployment,[31] and less strongly to prices, than do actual earnings. The United Kingdom is also the only country where the equations "explain" a larger proportion of changes in rates than changes in earnings (as shown by the R^2). A possible reason for this peculiarity is that collective bargaining is perhaps more decentralized in the United Kingdom than lsewhere.

Other economic factors affecting wage changes

Some of the studies of wage determination in individual countries, summarized in the Appendix, have assessed the significance of several factors other than unemployment and retail prices (or profits). Some analysts have successfully used indicators of the demand for labour other than unemployment, e.g. employment, or unfilled vacancies, or labour turnover. Others have successfully sought an explanation in a measure of the strength of trade unions — for example, in the proportion of trade union membership to the labour force. Several others, again, have tested the effect on wage change of short-period changes in the growth of productivity or in total output; generally, no close association has been found.[32]

The emphasis, in the discussion above, on unemployment and prices as determinant variables is not meant to indicate that other factors are regarded as without importance. Other indicators of demand for labour might afford a more powerful "explanation", but statistics are lacking for many countries. The association with a measure of trade union strength might well be worth testing,[33] but, again, figures in suitable form exist for few countries. The weak association found with productivity or total output in several studies certainly does not suggest that these factors are without influence on wage movements, but only that the association is diffused over time. A statistical analysis of the kind described, which seeks a convincingly close quantitative association in the short term, cannot also display the whole complex of ultimate causation.

Another hidden factor, which is not statistically identifiable but which may well be important in the process of postwar wage increases, is the influence of wage movements in one country on those in another. Within a group of countries so closely integrated economically as western Europe, the process of inflation — through wage increases or in other ways — inevitably spreads. International competition, as already observed, is not necessarily a more effective restraint on wage or price increases in one country than is domestic competition on wage or price increases within a given industry; in both cases, a general expectation that competitors will follow suit removes much of the force of competition. Especially in the smaller countries which are highly dependent on foreign trade, the pay bargainers are bound to be influenced by the course of pay and prices elsewhere. This is even more likely to be an important factor where bargaining is centralized and consequently sensitive to general economic considerations.

The influence of "policy"

How much does this type of analysis reveal about the effects of "policy" and of institutions on wage changes?

The question has two aspects. First, even a perfect fit of the facts to the equations might demonstrate simply that factors other than prices and unemployment, including policy, exercised a constant influence over the period investigated. The influence of any *changes* in policies and institutions, or of changes in other possible factors (unless, of course, they influenced wages through changes in unemployment or prices), would be reflected, if they were significant, in systematic deviations of the facts from the calculated line of regression. Some such temporary influences have been suggested above. But Chart 3.2 shows no clear evidence in any country of a steadily growing (or diminishing) influence of policy (or other factors) on the course of wages. Such an influence, if it had existed, would presumably be revealed by a deviation, extending over a period, of the facts from the regression line. It is perfectly possible to argue that any of the deviations in an individual year or two, as shown in the Chart, are, in fact, the result of policy. But the calculations imply the absence of any *persistent* change in the influence of "policy" during the period of observation.[34] Secondly, the question may be asked whether the different responsiveness of wages to prices and unemployment in the various countries can be associated with differences in policies, attitude, or systems of wage bargaining. The equations, even if they fitted the facts perfectly, could never of course demonstrate that the course of wages is subject to ineluctable pressures from prices or unemployment which must render any attempt to exercise a "policy" influence unavailing. The degree of sensitivity of wages to these pressures *may* be determined, at least in part, by the institutions through which wage settlements take place.

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[30] See Appendix 3.I, especially Lipsey and Steuer. However, Lomax found a significant association between profits and wage *drift*.

[31] The stronger response of rates than of earnings to unemployment is also apparent from other studies for the United Kingdom (compare equations 3 and 5 in Table 3.5).

[32] Productivity changes are, however, incorporated in the Netherlands wage model, along with unemployment and consumer prices.

[33] Especially in view of the remarkably good, although puzzling, fit found by Hines for the United Kingdom (associating changes in wages with changes in the overall proportion of trade union members, and with consumer prices). See Appendix to this chapter.

The answer to the question must remain open, if only because of the difficulty of defining differences in the methods of wage settlement. The only objective distinction that seems possible is that made earlier in this chapter between countries where wage bargaining has been under some form of central control and those where it has not. On this crude criterion, we can distinguish the following countries with a greater degree of central control than the rest:

Austria: with low sensitivity to unemployment and high sensitivity to prices, both for earnings and rates;
Denmark: with high sensitivity to unemployment and low sensitivity to prices, for earnings (data for rates not calculated);
Finland: with low sensitivity to unemployment and high sensitivity to prices, for earnings (data for rates not calculated);
Netherlands: with high sensitivity to unemployment for earnings, but not for rates, and high sensitivity to prices both for earnings and rates;
Norway: with uncertain sensitivity to both factors, both for earnings and rates;
Sweden: with high sensitivity to unemployment and low sensitivity to prices, both for earnings and rates.

There is nothing to indicate that this group of countries is distinguished from others by any marked differences in the rates at which wages respond to unemployment or price changes.

An assessment of "attitudes" by more subjective criteria might possibly result in a more satisfying explanation of differences between countries in the apparent response of wages to external forces. But on the evidence given here, it seems that differences in the sensitivity of wages to unemployment are more closely associated with the level of unemployment (as shown above) than with any obvious institutional or policy differences.

More generally, the impressions left by this statistical analysis are, first, that the influence of external factors, such as unemployment and price changes, explains a widely varying proportion of wage changes in different countries; secondly, that in every country a significant margin of wage changes is left unexplained; thirdly, that the rate at which wages respond to variations in unemployment and in prices, and also the relative importance of these two factors in wage determination, varies a great deal from country to country. More refined statistical analysis might well succeed in "explaining" a larger proportion of wage changes in some individual countries. Nevertheless, the evidence so far available suggests that in no western European country has the rate of changes in wages — whether conventional rates or earnings — been so immutably determined by external forces that any effort on the part of those concerned to change the response would have been futile. Yet the evidence also suggests that conditions in the labour market — and the rate at which consumer prices have been rising — set limits, in circumstances like those of the past 10-15 years, to the power of those concerned with wage bargaining to influence the rate at which wages increase.

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[34] Some analysts have, in fact, introduced "policy" influences into equations of wage determination as a separate variable (see Appendix 3.I.). But the examples given operated before the beginning of the period dealt with here.

3.3. DRIFT

Drift presents those who wish to operate a pay policy, either in the Government or in the unions and management organizations, with their biggest problem. It suggests that agreements at top levels, whether reached by central bargaining or not, can be largely frustrated. Even where, as in the Netherlands, actual pay levels are controlled by law, a certain amount of uncontrolled pay increases has occurred.

It is (as was suggested in section 3.1 above) superficial to take the view that drift has *completely* frustrated the efforts to achieve a controlled development of pay. But even if the efforts to co-ordinate bargaining at the centre have succeeded in influencing the increase in actual earnings over the economy as a whole, yet drift — if its incidence is uneven — might be expected to bring about changes in the structure of relative pay escaping control at the higher levels. The structure of pay becomes subject to decisions at the enterprise level — decisions effected either by management unilaterally or by informal bargaining — which throw doubt on the reality and usefulness of the established processes of collective bargaining and may frustrate the intentions of the bargainers. For a large proportion of workers, but by no means for all, it is the bargainers at the enterprise level, or perhaps the managements, who make the effective decisions about pay.[35]

Measurement of drift

Drift can be taken to mean increases in pay exceeding those prescribed by collective agreements (or, if collective agreements do not apply, by other procedures setting pay standards applicable over a wide field, such as arbitration awards or decisions of official bodies).[36] To measure drift in any one industry or country is difficult enough; to secure precisely comparable measurements between countries is impossible. Without detailed surveys of the pay records of individual enterprises, the analyst must be content with the rough measures given by comparison between statistics of actual average earnings and the constructed indices representing the movement of conventional pay rates. To construct such indices of conventional pay rates, judgement is necessary in interpreting the complicated provisions of collective agreements. For example, some indices include, while others may exclude, an estimate of the effects of changes in piece rates (or payment by results, or incentive schemes). Collective agreements do not generally list in detail the actual piece rates. More often, they provide for an overall increase and for machinery for adjusting rates; in many countries the usual practice is to provide that piece rates should be determined so that an average piece-worker should earn a given proportion more than a comparable worker on time-rates. But whether this ratio is in fact preserved must depend, for instance, on the development of productivity of the piece-workers during the currency of the agreement. Introduction of new methods, or improvements in the organization of the work, do not necessarily lead to a reduction in the rate "per piece" designed to stabilize earnings. Again, it may often be extremely difficult to determine how far agreements on the local or enterprise level, which may or may not be provided for in a collective agreement, are, or should be, incorporated in a general index. For these and other reasons an index of conventional rates is only an approximation to answering the hypothetical question: how much would pay have increased if actual pay were to be determined wholly and rigidly by the official agreements? The problems are solved differently in different countries' indices.[37]

Where there is a central agreement, the problem of identifying drift becomes particularly difficult. The application of the central agreement at the branch levels, through formal collective bargaining, may lead to a larger (or smaller) average increase than the central negotiators intended. The indices of conventional rates for the Nordic countries used here are estimates based chiefly on the *expected* overall effects of the central agreements.[38]

Normally, indices of conventional pay rates are weighted by the numbers of men and women engaged in particular occupations and branches in a base year. Thus one reason for the difference between these indices and the movement of average actual earnings is the changes in the employment structure. The effect of shifts between branches and between sexes is probably not of great importance over periods of ten years or so.[39] The effects of shifts between occupations may be more important but are not, in most countries, measurable from existing data. Consequently they appear as an element in drift. A related factor is promotion within the same occupational category; some of this may legitimately be counted as drift, since there can be no doubt that up-grading is sometimes adopted as a way of raising the pay of individuals without upsetting the formal pay structure.[40]

Changes in the amount of overtime worked at premium rates can influence significantly the gap between indices of conventional rates and actual earnings. For a few countries, separate estimates have been made of actual earnings excluding overtime pay, so that the influence of changing overtime can be distinguished from other elements in drift.[41] To the extent that the working of overtime is deliberately "contrived" so as to yield a higher income, it can also be legitimately described as a form of drift.

In most of the figures used here, for lack of more refined data, drift is necessarily the gross difference between indices of rates and the changes in overall actual earnings; it thus tends to overstate the amount of drift by including the whole effect of rising productivity on piece-work earnings, of changes in the employment structure, and of changes in the amount of overtime (which can work both ways), although some of these effects would have come about even if collective agreements had been applied in the most rigid way possible.

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[35] That this kind of development might occur in conditions of full employment was foreseen as long ago as 1947 by H. W. Singer; to attract labour, he suggested, individual employers would offer increases which the unions, looking to the national interest, refrained from claiming, so that an inflationary spiral of "employer-induced" and "union-induced" wage rises would occur. (H. W. Singer, "Wage Policy in Full Employment", *Economic Journal*, December 1947.)

[36] Drift is defined by Phelps Brown as occurring when "the effective rate of pay per unit of labour input is raised by arrangements that lie outside the control of the recognized procedures for scheduling rates". (E. H. Phelps Brown, "Wage Drift", *Economica*, November 1962.) The article provides a survey of the factors in wage drift in several countries during the 1950s, and useful references to Scandinavian and British literature on the subject.

[37] For a more detailed account of the impossibility of a precise measure of drift, see H. A. Turner, "The Disappearing Drift", *Manchester School*, May 1964, Appendix II.

[38] Thus in Sweden, for example, the individual employers' associations send to the SAF estimates of the expected effects of a new agreement, from which an overall measure is computed. But see page 3, footnote 7, for the statistical effect of the method of application of collective agreements in the Nordic agreements.

[39] In western Germany, in 1953-1960 the base-weighted index of male earnings rose 55 per cent while a current weighted index rose 54 per cent (weighted by occupations and regions as well as by branches) (OEEC, "The Problem of Rising Prices", 1961). In the United Kingdom, in 1948-1950 to 1957-1959, a base-weighted index (weighted by branches, only) of male earnings rose 75 per cent, and a current weighted index 77 per cent (L. A. Dicks-Mireaux and J. R. Shepherd, "The Wages Structure", *National Institute Economic Review*, September 1962, p. 39).

[40] For this reason, a form of drift may appear in the public service and other areas where definite pay rates are set for each grade and cannot be exceeded, but where the average speed of promotion can be varied. An investigation of pay changes in the United States public service over the period 1939-1962 showed that, while the statutory rates (base weights) had risen by 112 per cent, actual average salaries had risen by 192 per cent. In such a case, it is impossible to isolate the drift element, due to easier promotion to attract staff, from any genuine improvement in the occupational structure. (H. M. Doughty, "Fair Comparison: The Case of the US White Collar Civil Service", *Economica*, November 1965.)

[41] Separate figures for the United Kingdom are given in Chart 3.4 below.

The "earnings gap"

Attention is generally directed to the difference between the rates of change of conventional rates and of earnings. It is also important to know how far the established procedures for pay settlement determine the actual level of pay, and what margin there is for variations by decentralized pay determination. This "earnings gap" is not easy to establish, since collective agreements — for the reasons given above — do not necessarily determine with any precision actual levels of pay.

However, estimates have been made in a few countries. Thus a sample inquiry in 1962 in western Germany,[42] covering workers on times rates only, showed that actual average hourly earnings for men were 14 per cent greater than the average "tariff rates". For women, the excess was 10½ per cent. The variation between branches was very large: for men, from less than 1 per cent in brown-coal mining to more than 50 per cent in hotels and catering (the inquiry covered services as well as industry). However, these are extreme cases and for 38 of the 48 branches distinguished, the excess lay between 5 and 25 per cent. It was (for men) around 20-25 per cent in, for example, machine-building, chemicals and vehicles; 10-20 per cent in textiles, clothing, electrical engineering, shipbuilding and "stone and earth" industries; and under 10 per cent in food, drink and tobacco, construction, and most branches of mining.

In the United Kingdom, earnings in industry appear to exceed rates by a much greater margin than in western Germany, but there is probably greater uniformity between branches, at least in manufacturing.[43] Rough estimates for 1959 show average wage-earnings (excluding overtime), for men and women together, in manufacturing, as 36 per cent above standard wage rates (compared with under 25 per cent in 1948). By 1965, this excess has probably grown to more than 50 per cent; that is, decentralized pay determination now accounts for perhaps one-third of average wage-earnings in manufacturing. For 13 manufacturing groups, the excess in 1959 varied between 50 per cent in non-metalliferous mining products and about 15 per cent in food, drink and tobacco and leather. In most manufacturing groups, it was 20-40 per cent. But in construction, it was under 15 per cent.

Fragmentary data for France[44] suggest that the excesses of earnings over standard rates may be of the same order of magnitude as in the United Kingdom.

Some rough indications are also available for Italy.[45] These suggest that by 1964 overall actual earnings in the economy as a whole exceeded by 15-20 per cent the average tariff wage, a proportion only slightly larger than that given above for western Germany.

Explanations of drift

Some analysis of the reasons for the appearance of drift is obviously important for judging the efficacy of any attempt to co-ordinate and control the process of pay determination.

The first question to explore is the overall relation between drift and the demand for labour. It has already been shown that, in most countries for which the comparison can be made, actual earnings respond somewhat more sensitively than conventional rates to the unemployment level.[46] Hence it is to be expected that changes in drift should be positively associated with the unemployment level. The relationships are displayed in Chart 3.4, showing annual figures for drift (on an hourly basis) and unemployment.[47] The connexion between drift and unemployment is particularly clear in Sweden. It was in Sweden that the problem of wage drift first became acute and stimulated statistical analysis.[48] Swedish experience exposed the relationship between drift and the demand for labour and may have led to a

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[42] Summarized in "Übertarifliche Bezahlung der Arbeiter", *Wirtschaft und Statistik*, December 1964. A similar inquiry was made in 1957.

[43] For 1948 and 1959 estimates, see L. A. Dicks-Mireaux and J. R. Shepherd, "The Wages Structure and Some Implications for Incomes Policy", *National Institute Economic Review*, November 1962. The figures are derived not by direct inquiry but by use of the estimates regularly made by the Ministry of Labour of the proportional effect and monetary value of formal wage-rate changes. This method, which is subject to a wide margin of error, may underestimate the level of conventional rates as compared with those used in western Germany (which was confined to time workers, and where there is more local bargaining than in Britain). Current estimates are derived by taking the increases in rates and earnings since 1959. For a few cases, the results can be checked by comparing statistics of actual earnings for certain occupations with the corresponding standard rate. For example (a rather extreme example), the standard time rate for engineering fitters in January 1966 was about 230 shillings a week; actual earnings of fitters on time work were over 400 shillings — about 75 per cent greater. The corresponding proportion for labourers, on time work was 50 per cent (see Ministry of Labour, "Statistics on Incomes, Prices, Employment and Production", March 1966, pages 16 and 30).

[44] See Chapter 4, page 22.

[45] Secretariat estimate, derived by comparing total wage- and salary-bill in national accounts with figures of tariff rates given by *Confindustria*.

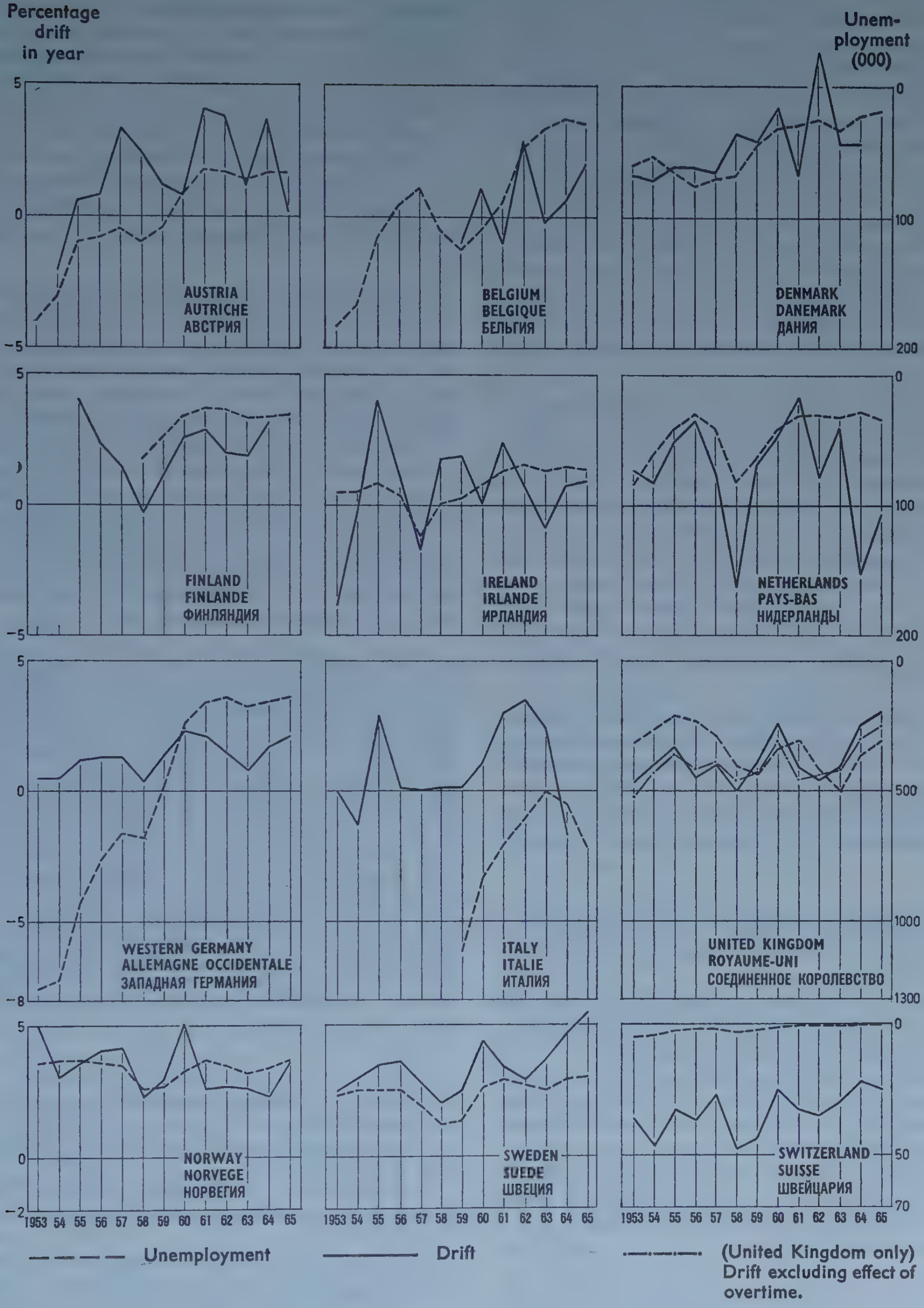
[46] See page 17. The United Kingdom is there shown to be the exception.

[47] In this chart, a moving two-year average is used for Norway and Ireland, because of the frequency of two-year conventional agreements which, as shown below, cause greater drift in the years between wage-rounds. In Ireland, it was also found that there was no clear relation between drift and unemployment. The relationship is not much better when, as in the chart, net emigration is added to the unemployment figures.

[48] B. Hansen and G. Rehn, "On Wage Drift" in *25 Economic Essays in honour of Erik Lindahl*, 1956. Hansen and Rehn studied drift in eight branches of manufacturing in 1947-1954. Cross-section correlation of drift with demand for labour (using vacancies minus unemployed) gave the best results; correlations with productivity and profits were much less significant. The relation between overall drift and demand for labour (on the same definition) in Sweden is demonstrated for 1957-1964 by S. Eskilsson, "The Wage Drift", *Skandinaviska Banken Quarterly Review*, 1966. The author discusses usefully the problems of wage drift in the Swedish context.

CHART 3.4

Drift and unemployment, 1953-1964



Source: Drift: Appendix Table 3.I.
Unemployment (annual average): OECD: *Main Economic Indicators; Historical Statistics 1955-1964;* United Nations, *Monthly Bulletin of Statistics.*

NOTES. — Ireland and Norway: the figures of wage drift are based on a two-year moving average (because of the frequency of two-year agreements). Ireland: net emigration in each year is added to unemployment.

somewhat uncritical application to other countries of the view that drift represents the market's "revenge" for insufficient response of collective bargaining to economic circumstances.

A fairly close relationship between drift and unemployment is also evident in western Germany as regards short-period fluctuations in drift (ignoring the longer-period downward trend in unemployment which resulted in only a small upward trend in drift). In Finland, the Netherlands,[49] the United Kingdom[50] and Switzerland, a relationship between drift and unemployment appears from the chart over much of the period — but it is a relationship which is unstable and occasionally broken. The relationship between short-period changes in drift and in unemployment appears even less regular, though it is present, in Austria, Ireland,[51] Italy and Norway. In Belgium and Denmark the short-term relationship hardly exists, although there, as in Austria, too, there is a suggestion that the long-term downward trend in unemployment is associated with some increase in the amount of drift.[52]

One factor which might be thought to reflect conjunctural fluctuations in pressures on the labour market, more accurately than the level of unemployment reflects them, is variations in the rate of increase of industrial output. Points can be found where drift appears more sensitive to changing rates of output expansion than to changes in unemployment. But more often the association with changes in unemployment seems more immediate.[53] It is evident that factors other than pressures on the labour market are, in most countries, responsible for a substantial part of the year-to-year variations in drift.

Some more detailed studies have found closer relationships between drift and cyclical indicators other than unemployment. Thus for western Germany, Scherf [54] found that the greater part of year to year changes in the amount of overall drift (on a weekly basis) reflected changes in productivity and hours worked. This result contrasts with the OEEC analysis of overall drift in western Germany;[55] it was then found that about 40 per cent of quarterly changes in drift, on an hourly basis, were associated with unemployment changes lagged by 9 or 12 months — a lag which would not be apparent from the annual averages in Chart 3.4. For Italy, Ammassari [56] showed that nearly two-thirds of the overall drift is associated with productivity changes. For the United Kingdom, Lomax [57] showed that about 80 per cent of wage drift is associated with the rate of change of industrial production; he also showed almost as close a connexion between drift and the rate of change of profits. (Rather lower correlations, but still significant ones, are found when the overtime element is excluded from drift. Lomax found only insignificant correlations between drift and unemployment, for the United Kingdom.)

The upshot of these analyses is to show that year-to-year changes in the amount of drift in industry as a whole can be to some extent explained by various indicators of cyclical change. But it is not possible to generalize about the relative importance, as immediate influences on drift, of the demand for labour (as expressed by unemployment), of "ability to pay" (as expressed by profits), and of production and productivity (as measures of the pressure of demand for goods and services). Further, there remains quite a large margin of changes in drift which are not statistically explained by these factors. These conclusions are much the same as those reached above in the examination of the determinants of changes in conventional rates and earnings.

Another possible reason for drift could be that it tends to compensate, over time, for variations in the movement of conventional rates. The result would be a more stable progression of earnings than of rates. This might mean, for example, that increases in conventional rates represent a catching-up of increases in actual earnings already brought about by drift.[58] When examined from this point of view (see Table 3.6), countries fall into three groups. In the first group are those where drift might be described as chiefly "compensatory", in the sense that a relatively large increase in conventional rates in a given year is most often accompanied by a relatively small amount of drift (and *vice versa*). This group includes Austria, Ireland, the Netherlands and Norway. In Ireland and Norway, the main reason is clearly the prevalence of two- or three-year agree-

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[49] The appearance of negative drift in the Netherlands in 1964 is no doubt the result of the very large increases in conventional rates in that year, of which one purpose was to absorb the widespread and partly "illegal" drift.

[50] Figures for drift including and excluding the effects of changing amount of overtime are given for the United Kingdom in Chart 3.4. The drift excluding overtime fluctuates a little less but the pattern of changes is the same and the differences are very small.

[51] An econometric analysis for Ireland brings out a close association there between unemployment and drift. K. Cowling, "Determinants of Wage Inflation in Ireland", *The Economic Research Institute*, Dublin, Paper No. 31, 1966.

[52] Correlations between drift and unemployment were calculated. They show a significant correlation only for Finland (0.8), western Germany (0.5), Sweden (0.6) and Switzerland (0.5). But all the correlations are affected by marked lack of correspondence in a few individual years, and Chart 3.4 perhaps gives a clearer impression.

[53] Correlations between drift and the increase in output were calculated, but show a significant correlation only in Finland. It should be noted that it is fairly common for the fluctuations in unemployment to lag behind those in production.

[54] H. Scherf, "Zur Frage der Beziehungen zwischen Löhnen und Preisen, 1951-1961", *Weltwirtschaftliches Archiv 1964*, Heft I.

[55] OEEC, "The Problem of Rising Prices", 1961, p. 356. The data cover 1952-1960.

[56] G. Ammassari, "I salari di fatto in Italia", Milan 1963, p. 114. Data cover 1954-1961.

[57] K. Lomax, "Wages, prices, profits and inflation", Paper read to Manchester Statistical Society, 9 March 1966. Data cover 1950-1964, for all industry.

[58] For the United Kingdom, this proposition, that collective bargaining represents simply a "consolidation" of increases in earnings brought about by drift, was shown to be unjustified by examining in detail the timing of increases in rates and in earnings. It was found that earnings in fact respond fairly quickly to increases in rates, rather than the reverse. See Phelps Brown and Browne, "Earnings in Industries of the United Kingdom, 1948-1959", *Economic Journal*, September 1962.

TABLE 3.6

Drift and conventional rates

Relationships between amount of drift and increases in conventional rates, in each year, as compared with average of each for whole period, in number of years

Country	"Compensatory" relationship			"Cumulative" relationship			Total
	Conventional rates						
	Below average	Above average	Total	Below average	Above average	Total	
	Drift						
	Above average	Below average	Total	Below average	Above average	Total	
Austria	5	5	10	2	0	2	12
Belgium	2	1	3	2	2	4	7
Denmark	2	4	6	3	3	6	12
Finland	3	1	4	4	2	6	10
Western Germany	1	1	2	4	7	11	13
Ireland	6	5	11	2	0	2	13
Italy	3	2	5	5	2	7	12
Netherlands [a]	4	4	8	3	2	5	13
Norway	5	4	9	1	3	4	13
Sweden	2	1	3	5	5	10	13
Switzerland	3	3	6	3	4	7	13
United Kingdom [b]	0	3	3	6	4	10	13

Sources: Appendix Table 3.I (when increases equal the average, it is counted as "above" average). [a] Series I. [b] Series I (includes overtime).

ments;[59] drift then pulls up earnings in the years between agreements. In the Netherlands there has been a certain alternation of large and small increases under the central contract, partly but not wholly offset by a reverse variation in drift. Even in these countries, however, the compensatory element accounts for only a part of the drift. There has generally been some drift even in years when conventional rates increased most (except in Ireland, where, at least until recently, drift was mainly confined to the periods between wage rounds). Thus the factors determining changes in conventional rates also seem to some extent to act directly upon drift and so upon actual earnings. The rate of change of conventional rates remains a significant factor influencing the rate of change of earnings.

In the second group of countries, drift can be described as chiefly "cumulative", in the sense that when conventional rates rise most, drift is also greatest (and *vice versa*). Into this group fall Italy, western Germany, Sweden and the United Kingdom.[60] The implication is that the factors determining conventional rates operate with cumulative force upon drift, and so upon earnings. The rate of change in conventional rates is the predominating determinant of the change in earnings. For the United Kingdom, this strong positive association between conventional rates and earnings confirms earlier findings. In a study for the 1950s, Dicks-Mireaux and Shepherd found that "changes in wage rates emerge as the dominant influence on earnings"; and that on average a 1 per cent rise in wage rates led immediately to a two-thirds per cent rise in earnings.[61]

There remains a third group of countries — Belgium, Denmark, Finland and Switzerland — in which neither the compensatory nor the cumulative type of drift clearly predominates on the rough test adopted here.

The conclusion is that the "compensatory" element plays some part in short-term (annual) movements of drift in several countries, especially where large and small increases in conventional rates tend to alternate because of two-year agreements or for other reasons. But the compensatory factor is rarely of great importance. In general, it is variations in the speed of increase of conventional rates which are the dominant influence on earnings (an impression also conveyed by Chart 3.2 above).

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[59] Something depends on the form of agreement: whether it provides for a single increase to last for two years or more, or whether it provides for a further subsequent increase. Practice has varied, but most often agreements have provided either for no subsequent increase or for a smaller one than in the initial year. Cost-of-living clauses may also result in increases during intercontract years.

[60] The Netherlands is also near the margin between this group and the "compensatory" group.

[61] L. A. Dicks-Mireaux and J. R. Shepherd, "The Wages Structure and Some Implications for Incomes Policy", *National Institute Economic Review*, November 1962. Their analysis suggested, however, a certain "compensatory" factor, as between branches of industry, over the period 1949-1959: the range of increase in earnings was somewhat less than that in conventional rates. Earnings rose more in the periods and branches where rates rose more, but not proportionately.

A third reason for persisting drift is the "automatic" influence of rising productivity on the earnings of piece-rate workers, even when the piece-rates themselves remain unchanged. This automatic influence must be distinguished from the connexions between drift and productivity, or production, described above (where productivity or production are used as cyclical indicators and their influence on drift is due largely to their effect on changes in pay at the local or enterprise level — either time rates or piece rates). It must be remembered that the extent to which drift of this kind appears in the statistics is partly a function of the way in which the statisticians treat piece rates in constructing the index of conventional rates. However, it might reasonably be expected that if any considerable proportion of workers are on piece-rate systems, the influence of changing rates of productivity increase would be reflected in varying amounts of drift. The influence would only be a short-lived one, because it is the general experience that the earnings of piece-rate workers do not for long run ahead of those of time workers; the conventional ratio between their earnings tends to be preserved either by revisions of collective agreements or by informal increases for time workers.[62]

In total, the relation over time between productivity changes and total drift does not appear to be generally conspicuous; it must be submerged by other elements. Its importance may be assessed more clearly in a branch-by-branch examination.

Analysis by branches of industry

The diversity of the reasons for drift is also brought out by the study of drift in individual branches of industry. Data for western Germany, the United Kingdom and Sweden are analysed below.

For *western Germany*, the 1962 inquiry into the relationship between tariff wages, earnings and the "earnings gap", in each branch, has been used to seek cross-section associations between the proportion of actual earnings to tariff wages in 1962, and various possible explanatory factors.[63] No consistent relation was found between the earnings gap and the trend in productivity over previous years. There was some association, but only a weak one, between the earnings gap and the demand for labour

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[62] See page 23 of Chapter 5. The distinction can be drawn between "primary" and "secondary" drift. Primary drift occurs when a particular group in a plant secures an increase in earnings (for example, through higher earnings on piece-rates). Secondary drift (for example, similar increases for time workers) tends to follow rather quickly to restore the disturbed relativities.

[63] The analysis by 32 branches (including some service trades) was made by the Federal Statistical Office and is set out in *Wirtschaft und Statistik*, December 1964. The data cover time workers only. For some other results of this inquiry see page 20 above.

TABLE 3.7

Western Germany: annual rates of change in conventional wage rates, earnings, drift and productivity, by branches of industry, 1953 to 1963

Industries arranged in descending order of hourly earnings in 1963	Hourly wage rates		Hourly earnings		Wage drift		Output per man-hour	
	per cent	Rank	per cent	Rank	per cent	Rank	per cent	Rank
	(1)		(2)		(3)		(4)	
Steel	5.6	18	7.0	18	1.4	11.5	5.1	10.5
Printing	7.1	6.5	7.8	13.3	0.7	18	. .	
Mining	5.2	19	6.7	19	1.5	7.2	7.6	4
Vehicles [a]	6.5	9.5	7.8	13.3	1.3	13.5	9.3 [a]	2
Chemicals	7.5	1	7.9	11.5	0.4	19	9.8	1
Construction	6.4	11.5	7.8	13.3	1.4	11.2	. .	
Non-ferrous metals	6.1	15	7.6	16	1.5	7.2	5.9	8
Steel construction [a]	6.5	9.5	8.2	6.5	1.7	6	3.1 [a]	16
Machinery [a]	6.4	11.5	7.9	11.5	1.5	7.2	4.0 [a]	15
Metal products	5.9	17	8.0	10	2.1	1.5	5.6	9
Stone and earth	7.2	4.5	8.4	3.3	1.2	15	6.9	5
Electrical engineering	6.0	16	7.3	17	1.3	13.5	4.9	12
Clothing	6.3	13	8.4	3.3	2.1	1.5	4.7	13
Plastics	6.7	8	8.2	6.5	1.5	7.2	8.4	3
Wood processing	7.1	6.5	9.0	1.5	1.9	3.5	6.8	6
Food	7.3	2.5	8.4	3.3	1.1	16	5.1	10.5
Musical instruments and toys	6.2	14	8.1	8.5	1.9	3.5	. .	
Textiles	7.3	2.5	8.1	8.5	0.8	17	6.2	7
Sawmills	7.2	4.5	9.0	1.5	1.8	5	4.3	14
Industry total	6.4	—	7.6	—	1.2	—	6.4	—

Sources: Statistisches Bundesamt, *Wirtschaft und Statistik, Preise, Löhne und Wirtschaftsrechnungen.*

[a] 1954-1963.

Rank correlations: Cols. (1) and (3): —0.5 (rates and drift)
Cols. (1) and (2): 0.6 (rates and earnings)

TABLE 3.8

United Kingdom: annual rates of change in conventional wage rates, earnings, drift and related factors by branches of industry, 1959 to 1965; men wage-earners

Industries (in descending order of weekly earnings)	Average changes in weekly						Average changes in hourly						Average weekly hours of estimated overtime		Percentage on payment by results		Annual increase in drift per worker		Unfilled vacancies as ratio to unemployment	
	Earnings		Rates		Drift		Earnings		Rates		Drift									
	per cent	Rank (1)	per cent	Rank (2)	per cent	Rank (3)	per cent	Rank (4)	per cent	Rank (5)	per cent	Rank (6)	per cent	Rank (7)	per cent	Rank (8)	per cent	Rank (9)	per cent	Rank (10)
Paper and printing	5.9	11.5	4.3	3	1.6	13	6.1	14	5.0	10	1.1	11	5.3	5.3	17	13	3.2	6.5	1.4	5.5
Vehicles	5.1	16	3.2	12.2	1.9	11.5	6.7	6	4.7	11.2	2.0	2	2.9	15	52	3	3.2	6.5	1.6	4
Metal manufacturing	5.7	14	3.2	12.2	2.5	6.5	6.0	15.5	4.7	11.2	1.3	8	4.5	12	62	2	2.9	8	0.7	12.5
Engineering and electrical goods	5.8	13	3.2	12.2	2.6	5	6.4	10.3	4.7	11.2	1.7	4.5	5.1	8	46	4	2.5	10	1.7	2.5
Other manufactures	5.9	11.5	3.5	10	1.4	14.5	6.5	7.3	5.8	3	0.7	15.5	5.3	5.3	45	5	2.1	12.5	1.1	8.5
Other metal goods	6.0	10	3.2	12.2	2.8	4	6.5	7.3	4.7	11.2	1.8	3	5.3	5.3	40	6	1.1	14	1.4	5.5
Chemicals	6.8	3.5	4.3	4.5	2.5	6.5	7.4	2	5.7	4.5	1.7	4.5	4.7	9.5	22	12	7.4	1	0.7	12.5
Bricks, pottery, glass, etc.	6.6	6	5.2	2	1.4	14.5	7.0	4	6.3	2	0.7	15.5	7.0	2	39	7.3	4.9	2	0.8	10.5
Shipbuilding and marine engineering	6.8	3.5	3.2	12.2	3.6	1.5	6.9	5	4.7	11.2	2.2	1	4.6	11	6.7	1	0.5	16	0.1	16
Timber, furniture	6.1	8.5	4.2	4.5	1.9	11.5	6.3	13	5.5	6	0.8	14	4.7	9.5	27	11	1.2	12.5	1.1	8.5
Construction	7.2	1	3.6	9	3.6	1.5	6.5	7.3	5.3	8	1.2	9.5	7.1	1	15	14	1.5	11	0.4	19
Gas, electricity and water	6.7	5	6.1	1	0.6	16	8.9	1	7.9	1	1.0	12.5	6.1	3	2	16	4.8	3	0.6	14
Leather, leather goods	5.6	15	3.4	11	2.2	8.5	6.0	15.5	4.5	16	1.5	6	3.6	14	38	7.3	0.7	15	1.7	2.5
Food, drink, tobacco	7.0	2	4.1	6.5	2.9	3	7.1	3	5.7	4.5	1.4	7	6.0	4	4	15	2.7	9	0.8	10.5
Textiles	6.2	7	4.0	8	2.2	8.5	6.4	10.3	5.2	9	1.2	9.5	4.0	13	39	7.3	3.9	4	1.2	7
Clothing	6.1	8.5	4.1	6.5	2.0	10	6.4	10.3	5.4	7	1.0	12.5	1.5	16	34	10	3.6	5	2.9	1
Total manufacturing [a]	6.0		3.5		2.5		6.6		5.1		1.5		4.7		31		3.2		1.2	

NOTE. — Data for earnings, rates, drift and overtime relate to averages of annual increases, October 1959 to October 1965. Industries arranged in descending order of level of actual weekly earnings (including overtime) in October 1959.

[a] Excluding construction and gas, electricity and water.

Sources: Columns (1), (2), (4), (5) and (10) from "*Statistics of Incomes, Prices, Employment and Production*" (Ministry of Labour). Earnings are for October; rates for average of September/October; Column (10) is average of June 1962 and June 1964.

Col. (7): Actual hours from "*Statistics of Incomes etc.*," less normal hours from "Time Rates of Wages and Hours of Work" (Ministry of Labour) for 1956, adjusted by index of normal hours in "*Statistics of Incomes etc.*".

Col. (8): *Ministry of Labour Gazette*, September 1961; Col. (9) Output from "*Annual Abstract of Statistics*"; employment from "*Statistics of Incomes etc.*" (figures for June).

Some Rank correlations: Cols. (1) and (2): 0.51 (weekly earnings and rates)
Cols. (2) and (3): —0.35 (weekly rates and drift)
Cols. (3) and (7): —0.17 (weekly drift and overtime)
Cols. (3) and (1): 0.34 (weekly drift and earnings)
Cols. (3) and (8): 0.16 (weekly drift and payment by results)
Cols. (3) and (9): —0.44 (weekly drift and productivity)
Cols. (4) and (5): 0.72 (hourly earnings and rates)
Cols. (5) and (6): —0.45 (hourly rates and drift)
Cols. (6) and (10): 0.03 (hourly drift and unfilled vacancies).

(unfilled vacancies as a proportion of numbers employed). There was, however, a clear inverse correlation among the 32 branches between the *level* of tariff wages and the excess of earnings (rank correlation –0.6 for men and –0.5 for women) — another measure of the "compensatory" element in drift; drift thus contributed towards evening out the inter-branch differences in tariff wages.

Inter-branch differences in drift over time, for 19 branches of industry in western Germany, are set out in Table 3.7. This analysis shows:

(i) A distinct although not very strong association between the branch increases in rates and those in earnings over the whole period 1953-1963 (rank correlation 0.6). In other words, the structure of relative earnings, as between branches, was not much changed by drift. There are, however, some striking exceptions: thus in chemicals the increase in rates was greater than in any other branch, but because of very little drift the increase in earnings was hardly above the average; by contrast, the clothing industry, with a less than average rise in rates, achieved by drift one of the largest increases in earnings.

(ii) There is evidence, again, of the "compensatory" element in drift. As between the branches, the amount of drift was negatively correlated with the rise in rates (rank correlation –0.5). In addition to the results for chemicals and clothing, drift was in part responsible for evening out the pay increases: thus the increases in rates varied between 5.2 and 7.5 per cent a year, but the increase in earnings only between 6.7 and 7.9 per cent.

(iii) Little association is apparent between drift (or earnings, or rates) and productivity increases.

Over the period, however, drift in western Germany was rather small, adding only 1.2 per cent a year to the 6.4 per cent a year increase in conventional rates.

Rather similar results emerge for the United Kingdom from analysis of the influence of drift (substantially greater than in western Germany) on the wage structure. Detailed statistics are set out in Table 3.8 for the period 1959-1965. The main conclusions are:

(i) Although during this period drift added as much as 2½ per cent a year to the rise in conventional rates of 3½ per cent a year in manufacturing as a whole, it did not greatly disturb the inter-industry wage structure. The rank correlation between increases in rates and increases in earnings is 0.5 when overtime is included in earnings. When overtime is excluded, the rank correlation coefficient rises to 0.7. The difference brings out, incidentally, the importance of overtime as a method of compensating for relatively small increases in rates.[64]

(ii) There is a distinct element of compensatory drift (even apart from the use of overtime) as is shown by the inverse rank correlation of –0.45 between drift (excluding overtime) and the rise in conventional rates. Thus, drift was greatest — at over 2 per cent a year (excluding overtime) — in shipbuilding, and in vehicles (mainly the motor-car industry), where the rise in conventional rates (taking the umbrella agreement for the engineering trades) was low; drift was least in "bricks, pottery, glass, cement, etc.", and in "other manufacturing" — where rate increases were among the greatest in the period.

(iii) The rank correlation between drift and productivity appears as negative.

(iv) There is only slight evidence of any relationship between the labour market situation in each branch (judged by the ratio of unfilled vacancies to unemployment) and the amount of drift.[65]

(v) The "automatic" influence on drift of piece-rate payments (taking the proportion of workers on piece rates in the middle of the period as a rough criterion) is slightly positive (rank correlation 0.2). This automatic element is clearly only a minor factor in drift, as suggested above.[66]

In *Sweden*, analysis of inter-branch differences in drift — like the analysis of total drift over time — has led to a greater emphasis on the influence of the demand for labour. A study for 1952-1959 by the OEEC, [67] covering eleven groups of industry, showed a fairly high association between drift and demand for labour (rank correlation 0.65). It must, however, be added that the OEEC figures for Sweden also show that "compensatory" drift was of considerable importance. (The rank correlation between drift and increases in rates was –0.9, a greater association than that in western Germany and the United Kingdom.) Drift also had the effect of evening out pay increases: the range of increases in rates was between 2.7 per cent a year and 5.8 per cent, while the range for earnings was only between 6.1 and 7.1 per cent. This must have largely counteracted the efforts made through collective bargaining to give effect to the principle of solidarity, under which the less well-paid branches should have achieved bigger increases than the average.

In contrast to the United Kingdom, the proportion of workers on piece rates is in Sweden a major factor in inter-branch differences in drift. (The rank correlation shown in the OEEC study between drift in each branch and the percentage on piece rates is 0.7.) In Sweden, as in the other Scandinavian countries, the proportion of industrial workers on piece rates is particularly high,[68] and a large amount of drift is commonly attributed to loose methods of fixing price rates.

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[64] Thus in shipbuilding and construction the increases in rates during the period were among the lowest, but the increases in gross earnings were among the highest, because hours worked were relatively long.

[65] The rank correlation is zero. It is only 0.3 if two extreme cases are excluded (shipbuilding, where there was heavy drift in spite of a large labour surplus; and clothing, where there was little drift but a very large number of vacancies (mostly for women), perhaps because of high turnover rates).

[66] A very detailed study of drift in the British engineering industry in 1948-1960 confirmed the absence of any significant automatic relationship between drift — taking men piece workers and time workers separately — and productivity. But for women pieceworkers a close connexion with productivity was found, suggesting that while drift for men piece workers depends on bargaining power rather than productivity, for women the position is reversed. (S. W. Lerner and J. Marquand, "Workshop Bargaining, Wage-drift and Productivity in the British Engineering Industry", *The Manchester School*, January 1962.)

[67] OEEC, "The Problem of Rising Prices", 1961, p. 403. This confirmed earlier findings for the period 1947-1954 by B. Hansen and G. Rehn, *op. cit.*

Summary and conclusions

(i) Variations from year to year in the amount of drift over industry as a whole tend, in the main, to reinforce rather than to correct the factors determining the rates of change in conventional rates (apart from the rather special case of drift in years between revisions of longer-term agreements). Over time, drift in total tends to be cumulative rather than compensatory. The compensatory element in drift exists, but is rather small. Hence the amount of drift tends to be associated with the various influences operating on pay generally — demand for labour, or other indicators of cyclical conditions. But the closeness of the association differs from country to country and — like the association between variations in pay generally and its determinants — leaves a large margin unexplained. There is no reason to believe that the process of drift in any country is so closely linked with pressure of demand that there is no room for other influences — apart from general demand policy — to be brought to bear.

(ii) By contrast, the differences in drift between branches of industry — so far as the evidence for a few countries goes — seem to be compensatory rather than cumulative. That is, drift does not much disturb the inter-branch pay structure, but it does tend to soften the disparities which result from differing increases in conventional rates. Differences between branches in the pressure of demand for labour play only a small part in western Germany and the United Kingdom, but have been more significant in Sweden.

(iii) From these two findings, it may be suggested that drift has the major effect of pushing up the whole pay structure in money terms, while doing something to modify inter-branch differences, and is somewhat influenced by demand for labour. In this process, variations over time, or between branches of industry, in the rate of increase of productivity seem to exercise only a minor influence. In particular, the "automatic" influence of productivity on the pay of workers on piece rates seems very small.

(iv) Nevertheless, the influence of piece-rate systems in promoting drift may well be extremely important, although this cannot be shown by the statistical analysis. But this is because changes in piece rates (and this must be taken to include all kinds of incentive payments related to output, whether to individuals or to groups) are more easy to claim, and to offer, than changes in time rates. The introduction of new methods of work, and adaptation of equipment, are continuous and may, in the first instance, affect only a few workers. Consequent changes in rates may depend on bargaining power rather than on expected cost-savings. But the resulting increases in earnings of one group — which has been described as "primary" drift — are likely to be followed very quickly by a "secondary" drift for those not immediately affected (other piece workers and time workers) and so by a rapid restoration of the previous relative wage structure.[69] Thus the efforts to create new differentials tend to be frustrated.

(v) It was suggested at the beginning of this section that one consequence of drift might be to create a dispersion of pay very different from that at which top-level negotiators are aiming. Although the influence of drift on the inter-branch pay structure does not appear to have been very great, its influence on dispersion of earnings between enterprises within the same branch may be much more important.[70] These disparities can raise acute problems for those concerned with establishing a more systematic or uniform pay structure.[71]

(vi) Finally, the statistical analyses have been chiefly confined to those sectors of the economy, whether in industry or services, where drift in fact occurs, or could occur. But a considerable proportion of the working population of all western European countries, mainly those in public administration and public enterprises, are generally not in a position to benefit from drift. Their pay rates are determined by centralized procedures which lay down pay schedules more or less fixing actual earnings though a certain element of "drift" can be introduced, e.g. by facilitating promotions, and "contrived" overtime, and may well be necessary to diminish the disparities in effective pay. But major disparities can remain, and are one reason for the particularly bitter conflicts over pay settlements in the public services in several countries, including France, Italy and the United Kingdom. Increasing recognition of the significance of drift has led to a wider acceptance of effective earnings in other industries, rather than conventional rates, as a criterion of "comparability". But this in turn has inevitably brought about in the first place big proportionate increases in public service pay which may, in their turn, have helped to push up pay in the private sector. The problem of achieving satisfactory relativities between those who benefit from drift and those who do not is in several countries another major issue in the construction of a co-ordinated incomes policy.

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[68] About two-thirds of workers in Swedish industry are paid at piece rates. The proportion is almost as high in Norway. In the United Kingdom it is about 40 per cent and in western Germany about one-third.

[69] For Norway: "The dominating type of drift seems to be the productivity drift on piece work" (L. Aarvig, "Wage Drift in Norway", *British Journal of Industrial Relations*, 1964, No. 2). Aarvig shows how such drift leads to corresponding increases for time workers in the same firm and then to other firms; "the solidaristic wage policy of the trade unions has to a very large extent been reflected in a fair wage policy on the employers' side". For the United Kingdom: "workshop bargaining over piece rates tends to act as a catalyst in the engineering wage drift. It appears that skilled male payments-by-results workers are in the strongest position in the workshop; the increases which they receive set in motion factory wage claims for other workers". Lerner and Marquand, *op. cit.*

[70] Unfortunately, there are not many analyses of pay which show clearly pay differences between comparable enterprises. The following are among the few examples:

(*a*) An analysis of 750 firms in *Norwegian* industry, in 1958, showed dispersions of average earnings by firms within the same industry varying between 8 per cent and 24 per cent (inter-quartile difference as per cent of median). "Lønns Glidningen 1950-1962", Oslo 1963 (report of joint inquiry by LO and NAF), Table 2.

(*b*) The results of the inquiry in the *French* metal and metal-using industry (quoted in Chapter 4, footnote 117) suggest very much wider dispersion.

(*c*) A large-scale analysis of wage statistics (for men only) in the *United Kingdom* was made for one week in 1958 (*Ministry of Labour Gazette*, July 1959), showing dispersions of average earnings by establishments within each industry. In most industries, average earnings in the upper quartile of establishments were 20-25 per cent above those in the lower quartile; the dispersion was wider in chemicals and some branches of engineering (e.g. aircraft), but narrow in food and drink and some branches of textiles. Since the hypothetical "standard rate" must lie well below the lower quartile, these figures are consistent with the estimates of the "earnings gap" made above.

[71] The Swedish central agreement of 1966 aims explicitly at a more uniform spread of the increase in actual earnings (see Chapter 4, page 10, footnote 41).

The problems for incomes policy caused by the persistence of drift are thus of two kinds: drift as an influence raising the whole pay structure in money terms, and drift as a source of disparities in pay between branches of industry, occupations, and enterprises which may or may not be regarded as justified.

Appendix 3.I

EMPIRICAL STUDIES OF WAGE DETERMINATION IN INDIVIDUAL COUNTRIES

United Kingdom

The first — and perhaps best-known — systematic analysis for a European country covering the postwar years was that of Phillips for the United Kingdom.[1] He related the annual rate of change of an index of average wage rates to the percentage rate of unemployment (lagged by 7 months); he calculated a regression equation for 1861-1913, and claimed that the equation fitted reasonably well the experience not only of that period but also of the inter-war period and of the postwar years to 1957. The fit was somewhat improved by introducing *changes* in the unemployment rate as an additional variable. Although the emphasis of Phillips' analysis was on the predominant role of demand, he allowed a small element for exceptionally large increases in the cost of living in certain years (mainly due to increases in import prices). Phillips' results were somewhat modified by Lipsey,[2] using the same data (with minor revisions). Lipsey introduced the cost-of-living index, as well as unemployment; he found the influence of the cost of living very weak in the period before World War I (a 1 per cent change in price producing only a 0.2 per cent change in wage rates over the whole period 1862-1913); he also found, however, that the cost of living was a much more important factor after World War I: for the periods 1920-1939 and 1947-1957 (taken together), wages were much less sensitive to unemployment than earlier but much more sensitive to price changes (the coefficient for price changes rising from 0.4 to 0.7).[3]

Phillips used his analysis to suggest a "critical level" of unemployment below which, on his equations, money wage rates would rise more than productivity. For a productivity increase of 2 per cent a year, the critical level of unemployment appeared to be 2½ per cent.[4]

A more intensive study of the postwar period was undertaken by Dicks-Mireaux and Dow.[5] Using more sensitive quarterly data, they gave most weight to the influence of the demand for labour[6] over the period studied (1946-1956). But they introduced two "cost-push" variables as well: retail prices (lagged by a few months) and "trade union pushfulness". The response of wages to a 1 per cent change in prices was put at about 0.5 per cent. And the response of wages to a 1 per cent change in unemployment was put at about 3½ per cent. "Trade union pushfulness" was measured on a scale, based on subjective impressions of the relative aggressiveness of wage demands at different periods. Its main importance was that it explained the moderation of wage increases (in relation to employment and prices) during the period of trade union restraint in 1948-1950. The analysis suggested, very tentatively, that the difference between "marked restraint" and "marked pushfulness" might affect the rate of wage change within a range of nearly 5 per cent. Dicks-Mireaux and Dow also introduced a time trend into the equation; this implied that with stable prices, unemployment equal to unfilled vacancies (zero "excess demand") and average "trade union pushfulness", wages would still rise at 2-2½ per cent a year. This could mean a fairly regular response to the trend rate of increase in productivity which was of the same order of magnitude; or it could represent a delayed reaction to one or more of the other variables.[7]

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[1] A. W. Phillips, "The Relation between Unemployment and the Rate of Change in Money Wage Rates in the United Kingdom, 1862-1957", *Economica*, November 1958. Previous econometric models had used wage determination equations derived from pre-World War II data. Tinbergen treats wage rates as related to employment in the United Kingdom, but the effects are small; and as related to employment or production, and to retail price changes, in the United States (J. Tinbergen, "Statistical Testing of Business Cycle Theories II" (1939) and "Business Cycles in the United Kingdom, 1870-1914" (1951). Klein, "Economic Fluctuations in the United States 1921-1941" (1950) and Klein and Goldberger, "An Econometric Model of the United States 1929-1952" (1955), relate wage changes in the United States to unemployment and (in the latter work only) to price changes, with a time trend. A. J. Brown, in "The Great Inflation 1939-1951" (1955), demonstrates graphically the relations between wages, unemployment and prices in the United Kingdom and the United States. Much earlier, J. R. Bellerby, in "The Controlling Factor in Trade Cycles", *Economic Journal*, 1923, had observed the relationship between the level of unemployment and the extent of price inflation. He suggested as an illustration that in the United Kingdom, rising output would be supplanted by rising prices when unemployment fell below about 3 per cent.

[2] R. G. Lipsey, "The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1862-1957: a Further Analysis", *Economica*, February 1960.

[3] Indeed the coefficients for unemployment in the equations for these periods do not appear to be significant, although the coefficient for prices is.

[4] With the nowadays more common assumption for the United Kingdom of a trend increase in productivity of 3 per cent, the critical level of unemployment would fall to about 2 per cent. Average unemployment in 1950-1959 in Great Britain was about 1.5 per cent. Critics of Phillips' analysis emphasized that the relationships, as demonstrated by Phillips' statistics, are not really so close that this kind of precision is justified. (See Guy Routh, "The Relation between Unemployment and the Rate of Change of Money Wages: A Comment", *Economica*, November 1959; K. G. J. C. Knowles and C. B. Winsten, "Can the Level of Unemployment explain Changes in Wages?", *Bulletin of Oxford Institute of Statistics*, May 1959.)

[5] L. A. Dicks-Mireaux and J. C. R. Dow, "The Determinants of Wage Inflation: United Kingdom 1946-1956", *Journal of Royal Statistical Society*, Series A (General), 1959, Part 2.

[6] As an indicator of the demand for labour, they used the excess of unfilled vacancies (adjusted for certain aberrations in the figures) over unemployment, expressed as a percentage of the labour force. The inverse relationship between vacancies and unemployment is, however, so close that the use of the unemployment rate alone would have produced very similar results.

[7] As suggested later by Dow: J. C.R. Dow, "The Management of the British Economy 1945-1960", Cambridge University Press, 1964, for National Institute of Economic and Social Research.

In addition, Dicks-Mireaux and Dow examined wage-rate changes in a few broad industry groups. The most significant conclusion was that the unemployment rate in each group did not appear important; wages seemed to respond to the influence of the national unemployment level and prices. The unemployment level in a particular industry did not appear much to affect wage changes in that industry.

In a subsequent study[8] (attempting, more ambitiously, a jointly estimated model of both wage and price changes) Dicks-Mireaux broadly confirmed the main results of his earlier wage equation. In this model, the explanation was directed not to wage rates but to actual earnings (annual average wages and salaries per head, as shown in national income statistics); the excess increase in earnings over rates — the wage drift — was, however, absorbed into the time trend term, which was given a higher value (about 4 per cent) than in the earlier calculations. Productivity was tested as a possible cause of changes in earnings, but made only a minor contribution.

Klein and Ball[9] also explained postwar changes in wage rates by unemployment, consumer prices, a political factor (introduced as a constant after 1952 to reflect increasing union "pushfulness") and a constant term. Their analysis, using quarterly data for 1948-1956, was intended primarily to provide a forecasting equation in a short-term econometric model for the British economy. Productivity and profits were also tried as explanatory variables, but without success. The main difference from Dicks-Mireaux and Dow's equations was that Klein and Ball showed a higher sensitivity of wage rates to retail prices (1 per cent rise in prices producing about 0.9 per cent rise in wages). Their equations also appear to show a somewhat greater sensitivity of wages to changes in unemployment.

In opposition to Phillips, Kaldor[10] advanced the view, on theoretical grounds, that profits, rather than unemployment, is the major determinant of wage changes; and that the relationship found by Phillips was due to the close inverse association between profits and unemployment. "The rise in money wages depends on the bargaining strength of labour; and bargaining strength, in turn, is closely related to the prosperity of industry, which determines both the eagerness of labour unions to demand higher wages and the willingness and ability of employers to grant them" (p. 293). This hypothesis was tested statistically by Lipsey and Steuer.[11] They examined a number of possible relationships (though admittedly not all possible relationships) between wages (hourly wage-earnings), profits and unemployment, both for the whole economy and for ten industries. They found that in the postwar period profits did not appear to be significantly associated with wage changes, but unemployment showed some — though a rather weak — relationship;[12] for the inter-war period, however, both profits and unemployment performed moderately well — profits somewhat better. For 1871-1913, unemployment explained much of the variance in wages, while profits explained very little. The effect of prices was not introduced into any of the equations and only annual data were used — which may help to explain why the degree of explanation was inferior for the postwar period to that provided by some of the equations referred to above.

The trend away from the almost complete "demand-pull" explanation of Phillips towards an explanation based predominantly on institutional factors was carried further by Hines.[13] His analysis, which produces an excellent fit to the data for 1893-1961 (excluding war years), finds almost the whole proximate explanation of aggregate wage-rate changes (using annual data of hourly rates) in two "cost-push" forces: retail prices (1 per cent rise in prices associated with a 0.7 per cent rise in wages), and a measure of trade union activity. The latter variable is the annual change in the overall percentage of workers unionized.[14] The sensitivity of wage rates to this variable is remarkable: over the whole period investigated a 1 per cent rise in the degree of unionization appears to produce a 2½ per cent rise in wage rates. Moreover, the response of wages increases over time. In the postwar period, when the percentage unionized varied only between 39.5 and 40.8 per cent of the labour force, a 1 per cent rise in the percentage of unionization (a bigger rise than ever, in fact, happened in one year) would have resulted in an extra 4 per cent rise in wage rates. However, the partial correlation for the postwar period alone is less satisfactory and a much larger constant (5 per cent a year) is found than in earlier periods. Thus the degree of union activity appears to produce only minor variations around a high rate of average wage increases.

Hines finds that the correlation holds not only for wage rates but also for average wage-earnings. He investigates the possibility that unemployment and the degree of unionization are connected inversely, but finds no significant correlation between them. Thus on his data, unemployment performs worse as an explanation of wage changes than does the degree of unionization.

Hines suggests a possible interpretation of what may at first sight appear an implausible result: namely, that a small change in the overall average unionization may in fact reflect quite a large change, in one important industry, indicating a strong and well organized campaign for a wage claim. If that claim is successful, it will, by the familiar process, become generalized quite quickly. The alternative possibility, that a successful wage claim induces bigger union membership, seems to be disposed of by introducing a time lag; the correlation between wage increases and subsequent rates of unionization is poor.

United States

In the United States, as in Britain, the conflict between full employment and price stability policies has stimulated several statistical studies of the process of wage formation since the mid-1950s. Much the same methods of analysis were used as in Britain, with more frequent emphasis, however, on company profits and the strength of trade union organization as possible determining variables, and with rather less emphasis — at least in the earlier studies — on unemployment. Moreover, because of the more decentralized system of wage bargaining, the distinction between actual earnings and collectively agreed wage rates is not meaningful in the United States and attention was directed to "explaining" the movement of actual earnings; the statistical inquiries also paid more attention to inter-industry differences; this is partly because the movement of wages has been more obviously influenced in the United States by a small number of "key settlements" in leading industries which seemed to set a pattern for periodical rounds of wage increases in industry generally. The steel and automobile settlements are usually given this leading status.

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[8] L. A. Dicks-Mireaux, "The Interrelationships between Cost and Price Changes 1946-1959", *Oxford Economic Papers*, October 1961.

[9] L. R. Klein and R. J. Ball, "Some Econometrics of the Determination of Absolute Prices and Wages", *Economic Journal*, September 1959.

[10] N. Kaldor, "Economic Growth and the Problems of Inflation, Part II", *Economica*, November 1959.

[11] R. G. Lipsey and M. D. Steuer, "The Relation between Profits and Wage Rates", *Economica*, May 1961.

[12] On aggregate data, unemployment and profits both showed weak relationships to wages. For individual industries, profits as an explanatory variable performed very weakly, but unemployment somewhat more strongly (using the unemployment rate in each industry, which performed better than aggregate unemployment, in contrast with the findings of Dicks-Mireaux and Dow reported above). However, the OECD secretariat did find some relationship between relative wage changes and profits in the United Kingdom (taking 13 manufacturing industries for 1948-1960), OECD, *Wages and Labour Mobility* (1965), pages 106-7.

[13] A. G. Hines, "Trade Unions and Wage Inflation in the United Kingdom: 1893-1961", *Review of Economic Studies*, October 1964.

[14] Hines shows that the *level* of unionization, used as an explanatory variable in some American studies, does not produce a good explanation for year-to-year wage changes in Britain.

Thus Levinson[15] examined wage increases (straight-time hourly earnings)[16] in 1947-1958 in nineteen manufacturing industries. He calculated simple correlations between annual wage movements and each of a series of possible determining variables. He found significant correlations between wages and profits[17] in rather less than half the years studied and in under half the industries, and rather less satisfactory correlations with concentration ratios. Much weaker correlations, or none at all, were found with other variables tried: changes in employment (as an indicator of demand for labour), in output, in productivity and (on the basis of cross-section analysis) with the proportion of trade union membership. Levinson did not test for unemployment. But a staff report of the Joint Economic Committee of Congress[18] added to Levinson's analysis a comparison in general terms of unemployment with earnings changes in the postwar years and concluded that "taken as a whole, the evidence suggests the general conclusion that the level of unemployment — or, alternatively, the degree of demand pressures in the labour market — does have an important effect on the rate of change in the wage level. In itself, however, this is of limited significance. More important is the fact that wages also showed not only a very high degree of downward rigidity, but also a tendency to continue to move upward, even during periods of substantial unemployment".

In a more systematic analysis of the influence of aggregate unemployment on aggregate earnings for the whole period 1900-1958 (taking annual data), Bhattia[19] found that unemployment and changes in unemployment explained little more than a quarter of the changes in wages, especially in the postwar period. In a later study,[20] he found that profits provided a far better explanation. The data were confined to the aggregate of manufacturing industry, for 1948-1959, but on this occasion changes during the year, not simply annual averages, were used. About 80 per cent of the variation in earnings were "explained" by the combined effect of the rate of profits (rate of return on equity capital) and of changes in that rate, with a lag of two months. Bhattia concluded that the inflationary pressure in the United States should be described as "profit-push" rather than "wage push".[21]

In a well-known study, Eckstein and Wilson[22] paid special attention to the influence of the "key" agreements on postwar wage developments. They analysed separately the determinants of the "key" wage bargains (taken to be not only steel and automobile but also about seven other industries including machinery, rubber, etc., where wage changes were very closely related), in terms of "wage-rounds", of which they found 5 in the years 1948-1960. In the key industries, changes in earnings were found to accord closely with an equation using the rate of profit and the rate of unemployment, a 1 per cent change in each being associated on average with a change in earnings of about 0.6 to 0.7 per cent a year, within the range of 1948-1960 experience. (Since the profit rate was more volatile than the unemployment rate, profit changes were somewhat the more potent influence on actual changes in wages.) No correlation was found between profits and unemployment. Substitution of consumer prices for the profits variable, in addition to unemployment, was tried; this gave a much less satisfactory fit. But because of the high collinearity between profits and prices, some doubt may still be felt whether it is profits or prices that should be regarded as the real determinant.

For industries outside the "key" group, the major influence was found to be the wage change in the key industries, but it was clearly somewhat affected by profits in the industry concerned.

A study by Perry,[23] for total manufacturing, using quarterly data for 1947-1960, took four explanatory variables with time lags: consumer prices, the rate of profits (both level and changes, after tax), and the unemployment rate. The partial correlations between wages and each of the four variables were found significant enough to justify the introduction of all four. Together they explained 90 per cent of the variation in wages. The author points out that the coefficient for consumer price changes is not very different from those found for Britain by Dicks-Mireaux and Dow (about 50 per cent compensation for price increases).

Another aggregative analysis by Klein and Bodkin,[24] however, found a sufficient explanation of wage changes in consumer prices and unemployment plus a time trend (of about 2 per cent a year), using annual data for the whole period 1900-1957; profits, in their view, were not a significant explanatory variable. Using quarterly data for 1948-1957, they also explained 70 per cent of the wage variation by prices, unemployment and the time trend, but did not attempt to introduce profits.

The short-term econometric model for the United States, constructed by a team under the auspices of the Brookings Institution, includes a price and wage model by Schultze and Tryon.[25] The wage model relates to annual rates of change in man-hour wage- and salary-earnings (including fringe benefits) in each of six non-agricultural sectors and is derived from quarterly data for 1950-1960. The explanatory variables are the rate of unemployment,[26] and the changes in consumer prices and profits[27] over the previous four quarters, together with the rise in wages four to eight quarters back. For manufacturing (both durable and non-durable) the equations explain 70 per cent of the wage change, but half or less of the wage change in construction, trade, "regulated industries"[28] and other industries. The clearest results that emerge, for manufacturing, are the high coefficients for consumer price changes, indicating 80 to 90 per cent compensation; and the tendency for larger than equilibrium wage increases in one year to be followed by less than equilibrium increases in the next, and *vice versa*.[29] The conclusions are summarized by showing that at "full-employment" (taken as 4 per cent unemployment), with average profits rates of 1950-1960 and with no changes in consumer prices, wages would rise at 4-5 per cent a year.

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[15] Harold M. Levinson, "Postwar Movement of Prices and Wages in Manufacturing Industries", Study Paper No. 21 prepared for the Joint Economic Committee of Congress in connexion with study of "Employment, Growth and Price Levels", 1960.

[16] I.e. total earnings adjusted to exclude pay for overtime work.

[17] The profit variable is profits, either before or after tax, after depreciation, as a percentage of shareholders' equity. Similar measurements of profit are used in most of the United States studies quoted.

[18] Staff Report on Employment, Growth and Price Levels (1959) for the Joint Economic Committee, p. 142.

[19] R. J. Bhattia, "Unemployment and the Rate of Change of Money Earnings in the United States, 1900-1958", *Economica*, August 1961.

[20] R. J. Bhattia, "Profits and the Rate of Change in Money Earnings in the United States, 1935-1959", *Economica*, August 1962.

[21] Bhattia suggests that Lipsey and Steuer's negative results (quoted above) in their test of the influence of profits on wages in Britain may have resulted from the use of annual averages.

[22] Otto Eckstein and Thomas A. Wilson, "The Determination of Money Wages in American Industry", *Quarterly Journal of Economics*, August 1962.

[23] G. L. Perry, "The Determinants of Wage Rate Changes and the Inflation-unemployment Trade-off for the United States", *Review of Economic Studies*, October 1964.

[24] L. R. Klein and G. R. Bodkin, "Empirical Aspects of the Trade-off among Three Goals", in *Inflation, Growth and Employment* by Conrad *et al.*, 1964.

[25] "The Brookings Quarterly Econometric Model of the United States", Ed. J. Duesenberry and others, Chicago-Amsterdam 1965, Chapter 9, C. L. Schultze and J. L. Tryon, "Prices and Wages".

[26] The reciprocal of the unemployment proportion is used, so as to reflect the greater responsiveness of wages to unemployment at low levels of unemployment than at high levels.

[27] Corporate profits, before tax, including inventory valuation adjustment, as proportion of gross product originating in the sector.

[28] For this sector — transport, communications, public utilities — the equations do not yield useful results.

[29] The authors note (page 332) that reworking the equations with data for 1953-1962 produced somewhat different estimates of the coefficients, and feel that although the basic structural elements are appropriate, more work needs to be done, especially on the time lags and the specification of the variables.

The same explanatory variables are used by the Office of Business Economics of the United States Department of Commerce to explain quarterly changes in average wage- and salary-earnings in the whole private sector, as part of a general short-term model.[30] The form of the equation is very similar to those used in the Brookings model for the individual sectors, but the degree of explanation for the aggregative measure of wages and salaries falls to about 60 per cent — less than the Brookings study found for manufacturing sectors but better than for the other sectors. Again, the coefficient for price changes comes out at nearly 90 per cent.

One other study for the United States, by Behman, finds an unorthodox but remarkably good explanation of annual wage changes in total manufacturing, in 1946-1961, using one determining variable alone — namely the "quit-rate", i.e. the percentage of the labour force voluntarily leaving employment.[31] The explanation suggested is that increasing voluntary resignations, which are known to be a significant "leading indicator" in business cycles, force employers into offering higher wages to new workers, or to keep those who would otherwise leave; the rise in marginal wages is subsequently diffused. The quit-rate is a form of labour demand indicator; its association with alternative indicators of labour demand has not been determined.

Like Phillips for the United Kingdom, several American students have paid special attention to the "critical level" of total unemployment, below which wages must be expected to rise faster than productivity. Their findings are somewhat discordant, for several reasons. First, the simple association between unemployment and wage changes is in any case very imprecise; to explain wage changes, with any hope of accuracy, other variables must be introduced. Second, the degree of imprecision about the unemployment/wage relationship is accentuated by its apparent curvilinear nature: the responsiveness of wages to unemployment seems to vary at different levels of unemployment. And "the critical level" of unemployment can lie outside the range of recent experience and be deduced only by a necessarily dubious extrapolation. Moreover, the practical significance for policy of the critical level depends on what rate of productivity increase is forecast.

Samuelson and Solow[32] put this critical level of unemployment in the United States at about 5-6 per cent for postwar conditions; they suggest that, in the past three decades of the century, an unemployment level of about 3 per cent would normally accompany a 2-3 per cent rise in wages. But, as in the United Kingdom, the relationships are not at all tight. Even in the postwar years, increases in wages of about 6 per cent were associated with unemployment of about 3 per cent in two years, and with nearly 6 per cent in another. They recognise that this "critical level" of unemployment, in postwar conditions, is much higher than the corresponding figure of 2½ per cent found by Phillips for the United Kingdom (referred to above), even allowing for a difference (which can hardly exceed 1 per cent) arising from differences in the statistical definition of unemployment. Klein and Bodkin, working from quarterly data for 1948-1957, put the critical level of unemployment higher still at 7 per cent (but given the actual growth in productivity for that period of 1.6 per cent per man-year).[33] Perry,[34] using quarterly data for 1947-1960, found that this critical level would vary also with the rate of profits: at the actual profit rate of 1953-1960, and with a growth rate of 3 per cent in productivity per hour, the critical level of unemployment, on Perry's equations, would be about 5½ per cent; but with a profit rate about one-tenth lower, the critical level would fall to under 5 per cent. He concluded that "without significant institutional or structural changes, reasonably full employment and complete price stability appear to be incompatible goals".

American experience in 1961-1965 was certainly not inconsistent with these calculations. Hourly earnings, rising by 3 per cent a year, were not increasing quite as fast as hourly productivity in industry; industrial prices increased very little, while unemployment was on average 5.8 per cent over the 5 years (about Samuelson's and Solow's critical level). Thus recent American experience gives *prima facie* support to the view that relative price stability can be bought by a slack labour market. But other features of this period are also significant. In particular, the main difference between 1961-1965 and any comparable postwar period is that productivity was rising significantly faster in 1961-1965.

Canada

A study of wage determination in *Canada* contains a new feature. Vanderkamp[35] offers separate analyses for the "organized" and "unorganized" sectors of the labour market. The "organized" sector covers mining, manufacturing, transport, communications and public utilities — where trade union membership averages about 40 per cent. The "unorganized" sector covers agriculture, forestry, fishing, trade and other services, with an average of 8 per cent union membership. The equation for the organized sector provides an 80 per cent explanation of wage changes in terms of unemployment, price change (70 per cent compensation) and productivity (found, rather exceptionally, to be a significant variable in the short run). The coefficient for unemployment, at comparable rates of unemployment, is in the same range as those found for the United States, and much lower than those found for the United Kingdom. For the unorganized sector, the best equation (taking into account unemployment, both the level and the change, and prices) resulted in only about 50 per cent explanation; in the unorganized sector both unemployment and prices have weaker coefficients. The greater success in explaining wages in the organized sector is similar to the experience of the Brookings model, quoted above: in that model the equations for manufacturing provided much better explanations than those for other sectors. The difference, as Vanderkamp suggests, runs counter to the view that collective bargaining "frustrates" the operation of the competitive market "mechanism".[36]

Other studies of wage determination in Europe

An "explanation" of changes in weekly wage rates (tariff wages) in *western Germany* is suggested by Scherf for 1951-1961,[37] using quarterly data. He uses three determinant variables — consumer prices, demand for labour and "trade union pushfulness". Because of the influx of immigrants, the author considers the demand for labour can hardly be measured by unemployment alone (since an increase in demand could be met largely by immigration); he uses employment, divided by unemployed, as an index (expressed logarithmically). For "trade union pushfulness", he introduces a constant factor from 1954 only, to represent the new policy of more aggressive wage demands pursued by the unions from that year. Profits were not tried as an explanatory variable, because of the lack of satisfactory data.

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[30] "A Quarterly Econometric Model of the United States: a Progress Report", *Survey of Current Business*, May 1966.

[31] Sara Behman, "Labor Mobility, increasing Labor Demand and Money Wage-rate Increases in United States Manufacturing", *Review of Economic Studies*, October 1964. The quit-rate (lagged by three months) explains 90 per cent of the variation in wages, with a low standard deviation. The rate of "new hires" was also tried, but proved less satisfactory. Schultze and Tryon (in the Brookings Model, see above) also found "voluntary quits" to yield a slightly better result than unemployment, as a measure of demand for labour, but ruled it out because of the difficulty of fitting it into a comprehensive economic model.

[32] P. A. Samuelson and R. M. Solow, "Analytical Aspects of Anti-Inflationary Policy", *American Economic Review*, May 1960.

[33] L. R. Klein and G. R. Bodkin, *op. cit.*

[34] G. L. Perry, *op. cit.*

[35] John Vanderkamp, "Wage and Price Level Determination: an Empirical Model for Canada", *Economica*, May 1966. The model analyses change in average earnings 1947-1962, as part of a simultaneously determined model of wages and prices.

[36] Following the study by Eckstein and Wilson quoted above, Vanderkamp tried to explain wage changes in the unorganized sector by introducing wage changes in the organized sector as an explanatory variable; but the results were negative.

[37] H. Scherf, "Zur Frage der Beziehungen zwischen Löhnen und Preisen in der Bundesrepublik Deutschland 1951 bis 1961", *Weltwirtschaftliches Archiv*, 1964, Heft 1.

The results are somewhat ambiguous. Scherf uses two alternative indicators of consumer prices: the official cost-of-living index, and the index of prices of goods sold in retail shops; the latter increased much less, and was less volatile, during the period studied, than the cost-of-living index. In the equation using the cost-of-living index, prices appear to be the major influence on wage rates, with a coefficient of over 2; demand for labour plays a relatively small part. But when retail prices are taken, the coefficient for prices rises to 1⅓, and demand for labour becomes a major influence. In either case, the apparent response of wages to price changes alone seems too large to be plausible.

In the *Netherlands*, short-term forecasting model of the Central Planning Bureau, changes in earnings are derived from changes in consumer prices and in unemployment; productivity is also introduced as a determinant.[38] The coefficient for percentage price changes is put at 0.4; for a 1 per cent change in unemployment, at around the level of 2 per cent unemployed experienced in the 1950s, the related wage change is about 2 per cent (the relationship is curvilinear, so that with unemployment at about 1 per cent, the wage change associated with a 1 per cent change in unemployment is 2½ to 3½ per cent). It may be noted that the general tendency of the model has been to underestimate the size of wage changes from 1953 onwards.[39]

For *Finland*, a number of equations have been calculated by Helelä,[40] using a variety of alternative formulations. The most satisfactory fits for the postwar period (1946-1958) are given by two equations: one relates changes in average wage- earnings to consumer prices and demand for labour (measured by the excess of vacancies over unemployed), the other to consumer prices and profits (as per cent of turnover). Both equations show low compensation for price changes (under 50 per cent). Helelä concludes only that the rest of the change in wages may be explained either by demand for labour, or profits, or both. He notes, however, that the response of wages to demand for labour seems to have been closer in the inter-war period than in the postwar years.

Experience in *Ireland* has been analysed by OHerlihy,[41] using both quarterly and annual data of hourly earnings in industry during 1949-1963. The major reason for the rise in wages appears to have been the level of non-agricultural unemployment; the actual level of unemployment in the period studied (30,000, or about 5 per cent of the labour force) is estimated to account alone for a rise of 3 per cent a year in earnings out of an actual average increase of nearly 5½ per cent a year. Most of the remaining average increase was accounted for by rising consumer prices; OHerlihy estimates 50-75 per cent 'compensation' for rising prices. Wage increases tended to occur in wage rounds in alternate years; but the increase in earnings in the years when wage rounds were initiated is only about 1 per cent more than in other years. A further study of Irish experience by Cowling[42] adds to OHerlihy's results. First he introduces the rate of change of profits and finds it significant; it diminishes the effect of unemployment. Secondly, he finds explanations of changes of conventional wage rates in the cost of living and changes in the degree of unionization. The influence of unemployment he finds to be related mainly to changes in the gap between rates and earnings (drift). Thirdly, an analysis of earnings by branches of industry shows two groups: in one, changes in wages appear chiefly associated with unemployment, in the other with profits and/or price changes — the former group being poorly organized, the latter with a high level of union membership. The tentative but suggestive conclusion is that union action can soften the impact of labour market forces and concentrate upon considerations of ability to pay.

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[38] J. P. Verdoorn and J. J. Post in "Econometric Analysis for National Economic Planning", Ed. P. Hart and others, 1964 (Proceedings of Colston Research Society). The model is based on annual averages and is derived from experience in 1949-1960 and 1923-1938 (the latter period being given a half-weight in estimating the coefficients).

[39] "Forecasts and Realization", Central Planning Bureau of the Netherlands, *Monograph No. 10* (1965).

[40] T. Helelä, "A Study on the Wage Function", Bank of Finland, 1963 (in Finnish, with extensive summary in English).

[41] C. St. J. OHerlihy, "A Statistical Study of Wages, Prices and Employment in the Irish Manufacturing Sector", Economic Research Institute, Dublin, Paper No. 29, 1966.

[42] K. Cowling, "Determinants of Wage Inflation in Ireland", Economic Research Institute, Dublin, Paper No. 31, 1966.

APPENDIX TABLE 3.I

Data on hourly conventional wage rates, hourly wage-earnings and the resulting wage drift used in Tables 3.1 and 3.2

Percentage increase over previous period (annual averages)

Year	Austria			Belgium			Denmark			Finland			France	
	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	"Rates" October	Earnings September
1953 .	0.0	..	..		0.0		0.0	1.6	1.6				2.5	2.5
1954 .	6.1	4.0	—2.1		2.7		3.0	4.5	1.4	..	..	..	5.9	7.2
1955 .	4.2	4.8	0.6		2.7		4.1	6.1	1.9	3.0	7.0	4.0	10.0	7.9
1956 .	4.9	5.7	0.8		7.8		6.3	8.4	1.9	11.7	14.0	2.3	8.0	12.0
1957 .	3.6	6.9	3.3		9.6		1.8	3.5	1.7	3.5	4.9	1.4	8.8	10.2
1958 .	1.0	3.4	2.4	..	4.4	..	2.2	5.5	3.2	5.0	4.7	—0.3	11.3	11.7
1959 .	5.4	6.6	1.2	2.1	1.1	—1.0	5.4	8.3	2.9	4.0	5.2	1.2	5.2	6.0
1960 .	6.3	7.1	0.8	3.1	4.2	1.1	1.7	5.9	4.2	3.1	5.7	2.6	7.6	8.7
1961 .	6.4	10.5	4.1	5.0	4.0	—1.0	10.4	12.0	1.6	4.5	7.4	2.9	7.6	7.7
1962 .	5.0	8.8	3.8	4.8	7.7	2.9	3.1	9.4	6.3	3.6	5.6	2.0	9.1	8.3
1963 .	5.6	6.8	1.2	8.2	8.0	—0.2	5.9	8.7	2.8	7.6	9.5	1.9	8.9	8.8
1964 .	5.1	8.8	3.7	10.1	10.7	0.6	4.9	7.7	2.8	10.3	13.5	3.2	6.7	6.1
1965 .	10.7	10.9	0.2	8.4	10.4	2.0	..	11.5	..	..	..	..	5.9	..

APPENDIX TABLE 3.I *(continued)*

Data on hourly conventional wage rates, hourly wage-earnings and the resulting wage drift used in Tables 3.1 and 3.2

Percentage increase over previous period (annual averages)

Year	Western Germany			Ireland			Italy			Netherlands I			Netherlands II		
										All enterprises			Industry		
	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	"Rates" October	Earnings October	Wage drift
1953	4.3	4.8	0.5	8.7	5.7	−3.0	1.4	1.4	0.0	1.9	3.7	1.8	0.9	2.3	1.4
1954	2.1	2.6	0.5	0.0	2.7	2.7	4.0	2.7	−1.3	10.4	8.2	−2.2	15.0	15.9	0.9
1955	5.6	6.8	1.2	0.0	5.3	5.3	3.8	6.7	2.9	6.2	10.2	4.0	0.7	3.2	2.5
1956	8.6	9.9	1.3	8.0	5.0	−3.0	6.2	6.3	0.1	5.4	5.1	−0.3	5.6	8.9	3.3
1957	7.4	8.7	1.3	2.8	2.4	−0.4	4.7	4.7	0.0	11.2	15.5	4.3	9.9	11.2	1.3
1958	6.4	6.8	0.4	1.8	5.8	4.0	4.4	4.5	0.1	4.0	6.0	2.0	3.6	0.5	−3.1
1959	4.0	5.4	1.4	3.5	3.3	−0.2	2.1	2.2	0.1	0.6	1.3	0.7	2.1	3.7	1.6
1960	7.0	9.3	2.3	6.0	6.4	0.4	4.2	5.3	1.1	7.4	9.1	1.7	7.3	10.0	2.7
1961	8.2	10.3	2.1	1.6	6.0	4.4	4.0	7.0	3.0	2.7	7.3	4.6	3.1	7.3	4.2
1962	10.0	11.5	1.5	15.1	12.3	−2.8	11.5	15.0	3.5	5.1	6.3	1.2	7.6	8.7	1.1
1963	6.7	7.5	0.8	2.1	3.4	1.3	14.7	17.1	2.4	5.2	8.6	3.4	4.3	7.3	3.0
1964	6.7	8.4	1.7	12.8	13.0	0.2	13.5	11.8	−1.7	13.3	14.2	0.9	17.6	15.0	−2.6
1965	7.7	9.8	2.1	1.8	3.6	1.8	8.6	..	..	7.3	9.0	1.7	8.9	8.6	−0.3

Year	Norway			Sweden			Switzerland			United Kingdom I			United Kingdom II			United States
										Including overtime			Excluding overtime			
	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	Rates September	Earnings October	Wage drift	Rates	Earnings	Wage drift	Rates	Earnings	Wage drift	Earnings
1953	1.0	4.7	3.7	0.3	2.8	2.5	0.0	1.4	1.4	5.0	5.3	0.3	5.0	4.8	−0.2	5.5
1954	2.1	4.5	2.4	1.7	4.8	3.0	1.0	1.3	0.3	4.7	5.7	1.0	4.7	5.4	0.7	2.3
1955	1.0	5.7	4.7	5.0	8.7	3.5	1.0	2.7	1.7	6.9	8.6	1.7	6.9	8.3	1.4	4.5
1956	3.4	6.8	3.4	4.3	8.1	3.6	3.4	4.7	1.3	8.0	8.5	0.5	8.0	8.8	0.8	4.8
1957	1.3	6.3	5.0	2.6	5.5	2.8	2.2	4.5	2.3	4.1	5.1	1.0	4.1	5.2	1.1	5.1
1958	5.3	4.8	−0.5	2.6	4.7	2.0	3.3	3.5	0.2	4.3	4.3	0.0	4.3	4.7	0.4	2.9
1959	2.6	9.1	6.5	2.0	4.6	2.5	2.1	2.7	0.6	2.5	3.6	1.1	2.5	3.2	0.7	3.8
1960	0.5	4.2	3.7	4.1	8.5	4.4	3.1	5.6	2.5	5.0	7.6	2.6	5.0	6.9	1.9	3.2
1961	5.6	7.0	1.4	3.6	7.0	3.4	5.0	6.7	1.7	6.3	7.2	0.9	6.3	6.7	0.4	2.7
1962	4.4	8.4	4.0	4.5	7.4	2.9	5.7	7.2	1.5	4.2	4.6	0.4	4.2	4.8	0.6	3.0
1963	3.9	5.2	1.3	3.0	6.7	3.7	6.3	8.3	2.0	3.0	3.9	0.9	3.0	3.8	0.8	2.9
1964	3.4	6.6	3.2	2.1	6.8	4.7	5.1	7.9	2.8	5.3	7.8	2.5	5.3	7.3	2.0	2.8
1965	4.5	8.5	4.0	3.9	9.6	5.7	4.8	7.3	2.5	6.3	9.3	3.0	6.3	8.8	2.5	3.2

Sources: (Showing in brackets the industrial coverage for wages): OECD, *Main Economic Indicators, Historical Statistics 1955-1964;* ILO, *Year Book of Labour Statistics;* United Nations, *Statistical Yearbook*, and *Monthly Bulletin of Statistics.*

Other sources utilized:

Austria: *Wirtschaftstatistisches Handbuch* (Industry and handicraft in Vienna);

Belgium: *L'Economie belge* (Rates in manufacturing; earnings in mining, manufacturing and transport);

Denmark: OEEC, *The Problem of Rising Prices* (1961); and *Inflationens Årsaker*, including an article by Mr. Lüttichau: "Lønstruktur og Lønstigning" (Industry and construction; in 1958-1964, rates and earnings refer to April figures);

Finland: *Statistical Yearbook*, and *Sosiaalinen Aikakauskirja* (all economic activities covered, including agriculture and public administration). The wage rate index is constructed by the Bank of Finland Economic Research Institute — see article in *Suomen Pankin Taloustieteellisen Tutkimuslaitoksen Julkaisuja, Sarja A:* 28-1966);

France: *Revue Française du Travail* (Manufacturing, construction and trade — rates in October compared to earnings in September). The figures for rates relate to the most common rates actually in effect; since there is no series strictly relating to the rates under collective agreement, no calculation of drift is made;

Western Germany: *Preise, Löhne, Wirtschaftsrechnungen* (Mining, manufacturing, construction and services);
Reihe 11 = Arbeiterverdienste,
Reihe 12 = Tariflöhne und Tarifgehälter;

Ireland: *Statistical Abstract* and the *Irish Statistical Bulletin* (manufacturing);

Italy: *Statistical Yearbook* and *Bolletino Mensile di Statistica* (manufacturing);

Netherlands: Series I: annual averages covering all enterprises. Figures communicated by the Central Planning Bureau revising series given in annual Economic Plans. Earnings exclude lump sum gratuities. Series II (covering industry and referring to October data): *Maandschrift van het Centraal Bureau voor de Statistiek;*

Norway: *The Norwegian Post-War Economy* (1965) (mining and manufacturing) annual average estimated for rates from data for first quarter;

Sweden: OEEC: *The Problem of Rising Prices* (1961); OECD, *Economic Surveys of Sweden;* K. Faxèn, "Incomes policy in Sweden", *British Journal of Industrial Relations*, November 1964 (mining and manufacturing). Figures for 1952-1960 represent changes from November to November;

Switzerland: *La Vie économique;* "Enquête sur les salaires et traitements versés en octobre" (manufacturing and trade);

United Kingdom: *Statistics on Incomes, Prices, Employment and Production*, series I includes the effect of overtime and series II excludes it. The figures cover all industry except coal mining, plus a few non-industrial branches. The figures relate to the average of April and October in each year. For series II the percentage increases are:
1952-1958, rates 5.5, earnings 6.2 and wage drift 0.7
1958-1965, rates 4.6, earnings 5.9 and wage drift 1.3.

United States: *Statistical Abstract of the United States;* and *Survey of Current Business.*

NOTE. — The series on conventional rates and earnings refer to male and female wage-earners (exceptions: Netherlands II and Norway cover male wage-earners only). Employer's social contributions (contributions to social insurances, pension schemes) are excluded. Family allowances etc. paid directly by the employer (Austria and Switzerland) are included in earnings.

CHAPTER 4

THE MACHINERY FOR PAY BARGAINING AND INCOMES POLICY

The mode of operation of any incomes policy, and its effectiveness, must be closely related to the existing system of collective bargaining. Every national system of collective bargaining in western Europe has grown up through a long history of organizational development, marked, often enough, by political and social conflict. None of these systems is completely rigid. Each contains the possibility of a variety of methods of wage settlement, and the ways in which the system is used may differ between branches of industry, between enterprises, and between areas. In most countries, too, changes are going on, shaped by the interplay of personalities and groups, by political movements, by the changing structure of industry. Thus no neat classification of bargaining systems, and no formal description, can hope to do justice to the ways in which the different systems work in practice.

Broadly speaking, the organizational features of pay settlement may be listed as follows:

(*a*) the extent to which *government* takes a direct part in the outcome of pay bargains (apart from the pay of its own employees);

(*b*) whether the system includes provision for a *central negotiation* of the majority of pay changes;

(*c*) the importance of the different levels of collective bargaining: branch level, on a nation-wide scale, or for large geographical areas;

(*d*) how much importance attaches to formal *collective bargaining at the plant level* (or for small groups of plants) in which the trade union is directly concerned;

(*e*) how much importance attaches to *less formal pay determination at the plant level*, where the individual employer deals directly with a group of workers, or even with individuals, outside the established framework for collective bargaining with the trade unions.

The division between these different levels of pay settlement is sometimes very uncertain. In almost every country, the actual level of pay is determined, to a greater or less extent, by influences brought to bear at each of these levels. But their relative importance varies greatly.

"Incomes policy", in the sense in which it is used here, implies a co-ordination of pay settlements and this in turn implies a concerted strategy on the part of the workers' and employers' organizations. The opportunities for such a concerted strategy must depend in part on the ways in which the organizations concerned have established arrangements allowing for a certain degree of centralization of authority. It may be useful to review the comparative systems of pay determination by examining first some of the features of the machinery for pay determination in five countries — the Netherlands, Denmark, Finland, Norway and Sweden — where major efforts have been made to centralize and co-ordinate pay settlements through the establishment of formal central bargaining between workers and employers, with direct intervention of Government in the Netherlands but not elsewhere.

We go on to consider three other countries where important efforts have been made, with varying degrees of success, to establish machinery for control of incomes — Austria, the United Kingdom and France — within a framework of sectional pay bargaining. In the remaining countries of western Europe — Belgium, western Germany, Ireland, Italy, Switzerland — where developments are described at the end of the chapter, no elaborate formal arrangements exist, or have been attempted, for modifying substantially the arrangements for sectional pay bargaining,[1] although there, as elsewhere, governments have made occasional efforts to influence the results of bargaining.

In describing the systems of pay settlement, we will also try to assess the importance of *price* controls, and their relevance to the development of incomes policies.

4.1. CENTRAL NEGOTIATION OF PAY CHANGES IN THE NETHERLANDS AND THE NORDIC COUNTRIES

The countries where central pay negotiation is common practice are Denmark, Finland, the Netherlands, Norway and Sweden. In each of these five countries, it is normal, although not invariable, for a major part of pay changes to be determined by a single negotiation between the trade union and employers' federations. There is, however, the very important difference that in the Netherlands — but not in the other four countries — the pay settlement can be applied only if approved by the Government; the Netherlands system represents the most complete approach to a co-ordinated incomes policy, and requires separate treatment.

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[1] Except for one central agreement in Ireland, in 1964.

The Netherlands — central pay bargaining with statutory sanctions

Since 1945, the Netherlands has operated a pay policy which is unique in the world for its intricate and changing combination of collective bargaining with Government intervention and statutory regulation. The Netherlands is the only country in western Europe where pay settlements can be applied only with Government approval (except for short periods of emergency) and where approved pay settlements determine maximum as well as minimum pay. In addition, the Government operates a direct and comprehensive system of price control (see p. 10).

Underlying the complex machinery, and far more important, was a rather special combination of circumstances after the war. The major elements might be described as follows: a general realization, by a community knit together by the experience of war, of the immense task of reconstruction; on the labour side, a centralized trade union structure which was not, however, very strong and was without a particularly militant or political tradition; and a general respect for authority — including, more specifically, a respect for the scientific authority and objectivity of the newly established Central Planning Bureau, whose analyses and projections, rarely over-optimistic, exercised an important restraining influence on pay and prices. In this social atmosphere it was possible, by mutual agreement, to keep pay and price levels low, in relation to those in neighbouring countries, for at least a decade after the war. The subsequent increases, as was pointed out in the previous chapter, were rather faster than elsewhere, but at least until the early 1960s represented no more than a partial and gradual erosion of the cost advantages already gained. The low labour costs in themselves contributed to swell the pressure of demand for labour, while the apparatus of control was strained both by the pressures from the workers on the union leadership, and by pressure from employers suffering from labour shortage and hindered from paying the higher wages that they could afford (especially in export industries where prices, geared to international markets, were yielding high profits).[2] The framework of control and co-ordination remained to a remarkable extent intact, although modified gradually in the direction of reduced Government intervention and reduced central authority. It has by now become subject to very considerable stress, and its future pattern is not yet decided.

The institutional framework was established immediately after the war, at a time when "thorough regulation of almost anything was thought unavoidable or even natural".[3] The first of the new institutions directly concerned with pay settlements was the Foundation of Labour, which brought together representatives of the unions and employers' centres, together with the Farmers' and the "Middle Class" Organizations, in a single central body with industry councils in various branches. It is under the supervision of the Foundation of Labour that the major pay negotiations take place between the trade union federations and central employers' organizations. These central negotiations lead to a frame agreement, or guide lines, to be followed in subsequent branch and local bargaining.

Secondly, the power of state intervention was established through the Board of State Mediators (a pre-war body for arbitration and mediation in labour disputes, whose functions were entirely transformed); by the Extraordinary Decree of 1945, this Board was given power to approve or disapprove negotiated agreements and to make them binding on the branch concerned and offenders could be prosecuted.[4] The Board consists — apart from its full-time Chairman — of independent persons but is responsible to the Minister of Social Affairs. The Board is under an obligation to consult with the Foundation of Labour before arriving at decisions.[5]

The effect of the introduction of state intervention — creating, almost, a tripartite negotiation — was to reinforce the influence of the central union and management organizations. The existing organizations were not ill-adapted for this purpose. The confessional and political divisions within the trade union movement put the emphasis on the central rather than on the industrial or occupational union; the federations[6] have been able to co-operate with each other, as well as with the Government, so that inter-branch competition was at least subdued.[7] The main union groups had links with the parties in the series of coalition Governments which have ruled in the Netherlands for most of the postwar period.

It was never supposed that incomes policy should be operated in a vacuum. Pay bargaining has throughout been influenced by the consultative institutions associating unions and managements with the formation of general economic policy. For this, the main instrument has been (since 1950) the Social and Economic Council, consisting, in equal proportions, of representatives of the unions, representatives of managements, and independent persons (not officials) nominated by the Crown to represent the public interest. The Council, guided by the analysis and expert forecasts submitted by the Central Planning Bureau — itself a body with a certain independence — takes no direct part in pay negotiations, but has generally been able to arrive at an agreed conclusion, timed to fit in with the negotiations in the Foundation of Labour, about the "room" for pay increases in the light of the Council's views about economic policy on a whole.

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[2] The extent to which policy in the Netherlands was able to maintain a certain "internal disequilibrium" is stressed by A. Kervyn, in "Politique des revenus: L'expérience hollandaise", *Revue d'économie politique*, May 1965. He writes that the attempt to keep down prices and wages in a country subject to over-employment and so open to foreign trade would have been impossible (except by frequent exchange adjustments) in a country "less remarkably disciplined than the Netherlands. In fact, what is surprising is less the 'explosion' in 1964 than the fact that it did not happen much sooner" (page 26).

[3] J. Pen, "Income Policy in the Netherlands 1959-63", *Scottish Journal of Political Economy*, November 1964, p. 183.

[4] It was also a function of the Board to fix binding pay rates in the absence of a collective agreement; and to establish general principles for collective bargaining.

[5] This often meant that the Foundation of Labour submitted to the Board its own recommendations on individual agreements, which were as a rule followed.

[6] There are three union federations — the non-denominational and Socialist NVV (the larger group), the Catholic KAB, and the Protestant CNV. There are also many small unions outside the federations. The Council of Trade Union Federations united the three federations until 1954, when it was dissolved after an episcopal prohibition of Catholic membership of the NVV. This did not prevent close collaboration. On the employers' side, the non-denominational *Centraal Sociaal Werkgevers Verbond* (CSWV) predominates, although there are other groups.

[7] "The basis of trade union affiliation had as a consequence that the big federations were not, *vis-à-vis* each other, in the position of rivals. This avoided the phenomena of bidding-up habitual elsewhere." (A. Kervyn, "Politique des revenus: L'expérience hollandaise", *Revue d'économie politique*, May 1965, p. 4.)

In these ways, and given the general willingness to co-operate which was characteristic of the leading organizations in the Netherlands during most of the postwar period, it was possible to reach a certain consensus on the immediate major issues of incomes policy. An important element in this consensus has been the general recognition that price stability is not the only objective of incomes policy; price stability and, even more, stability of unit labour costs has been regarded as only one part of a policy aimed first at reconstruction and then at economic growth. Hence the comparative statistical "test" applied in Chapter 3, based on increases in labour costs, is only one criterion of the effectiveness of the policy.

The shift towards decentralization in the Netherlands

The execution of incomes policy in the Netherlands has shown two interconnected developments over the past twenty years: first, the influence of Government has been gradually diminished; secondly, there has been a series of attempts to find a way of allowing greater differentiation in pay increases between branches, while retaining some co-ordination of such changes in the pay structure.

For nearly ten years after the liberation, the central pay settlement took the form of uniform and modest percentage increases for all branches and occupations, justified only by increases in the cost of living (themselves due mainly to import prices and other independent forces). Thus by 1954, the Netherlands was about the only western European country in which there had been no increase in real hourly wage-earnings since 1948.[8] Indeed in 1951 a reduction in real wages was accepted by agreement (a price rise of 10 per cent, due largely to a reduction in consumer-price subsidies, being accompanied by a wage rise of only 5 per cent). The immediate occasion was the balance-of-payments deficit and loss of real income due to the unfavourable turn in the terms of trade during the Korean war. These misfortunes, of course, were not unique to the Netherlands. But only there were they regarded as justifying a negotiated and deliberate reduction in real wages.

From 1954, it was accepted that increases in real earnings could be justified by the rate of economic growth and that year's agreement was for a general rise of over 10 per cent in money rates. The concept of the "room" for pay increases was developed, meaning "the increase that the group can secure without harming others in their absolute real incomes".[9] In 1956, a first step was taken towards differentiation: a maximum increase of 6 per cent was agreed centrally, the expectation being that branches with high rates of productivity increase would take this maximum increase, while other branches would agree on less. In fact, in almost all branches (except agriculture), the full 6 per cent was agreed.[10] After the 1958 recession, there was further discussion of the possibilities of differentiation. In spite of considerable disagreement in the Social and Economic Council, the Government instituted in 1959 a new system, broadly relating the criteria for Government approval of pay increases in individual branches to expected increases in productivity in the branch (the expected growth rates of productivity to be related to those in the recent past). This criterion was in strong contrast to the principle of "solidarity" underlying the co-ordination of pay increases in the Nordic countries and elsewhere and was, indeed, opposed in principle at that time by the NVV and by some employers. Immediately, difficulties arose in applying the productivity criterion — difficulties both of statistical interpretation[11] and of equity. In the event, average pay increases in 1960 and 1961 considerably exceeded the average increase in productivity. For a short time, an effort was then made to operate a formula under which each branch wage increase took into account a weighted average of the rise in productivity in that branch and the overall growth of productivity in the economy. Friction increased between the unions, employers and the Board of Government Mediators (the body responsible for enforcing the complicated formula which often implied altering the terms of branch agreements) and there was a wave of opposition, on the part of both employers and unions, to the amount of Government intervention which the detailed and difficult criteria required. A new effort was made to get agreement on criteria, and after two years of difficult discussion in the Social and Economic Council a fresh framework for policy was introduced in 1963.

This new system, which was accepted by the Government only under strong pressure from the industrial organizations, implied a substantial relaxation of official intervention and the abandonment of specific criteria for sectional pay adjustments. It provided first that the

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[8] See the *Economic Survey of Europe in 1955*, Chart 12, p. 161.

[9] J. Pen, *op. cit.*

[10] The Government had tried to avoid this result by stipulating that price increases would be authorized on grounds of rising labour costs only to the extent justified by a 3 per cent wage increase. In principle, wage increases over 3 per cent were to be absorbed by productivity gains or from profits.

[11] For a lively description see J. Pen, "The Strange Adventures of Dutch Wage Policy", *British Journal of Industrial Relations*, October 1963. For about 30 per cent of industries covered by collective contracts, no statistics of productivity existed. It has been suggested that the statistics of past productivity growth "became a negotiable issue — past productivity growth was what employers and trade unions agreed they wanted it to have been". (H. A. Turner and H. Zoeteweij, "Prices, Wages and Incomes Policies", ILO, 1966, p. 133.)

Social and Economic Council should advise on the overall pay increase regarded as admissible. Secondly, the unions and employers' federations, in the Foundation of Labour, should negotiate a central agreement providing a general basis for branch agreements. (Neither of these elements in the new system represented a fundamental change.) Thirdly, the branch agreements should be submitted for approval to the Foundation of Labour — the joint union-management body, without Government members; thus — and this was the major change — the internal co-ordination, and the Government's authority to approve or disapprove agreements, would normally be exercised jointly by the central union and employers' organizations in the Foundation of Labour instead of by the official Board of Government Mediators which had previously performed this function. Finally, the Board of Government Mediators would, however, retain powers to advise the Government to refuse to sanction an agreement which appeared to the Board to contravene the public interest — a power expected to be used only exceptionally (so far very little employed) — and the Government retains power to order a temporary "wage stop".

The new system came into operation just at the time when labour shortages were becoming increasingly acute, and proved incapable of resisting the sectional pressures which caused the "wage explosion" of 1963-1964. The Foundation of Labour and the Government were forced into accepting much larger increases than the maximum recognized to be "admissible" for price stability, not only by the pressure of union claims but also by the willingness of employers to pay substantially more and by the prevalence of "black" wages.[12] In 1966, disagreement between the Government and the Foundation of Labour resulted in the temporary transfer of the power to approve or disapprove agreements from the Foundation of Labour back to the Board of State Mediators.

It has become clear that a further revision of the procedures and principles of wage fixing is required, and that this will take the form of increasing the formal, as well as the effective, freedom for branch — and probably plant — bargaining. Thus, even if general guidance continues to be given on the "norm" for wage increases, and if formal powers of approving or disapproving settlements are retained by the Government, yet the powers of the central federations and of the Government to influence the distribution of wage increases are likely to be much reduced.

This move towards greater freedom of sectional bargaining has come from both sides of industry, but more particularly from the unions. It has proved impossible for the central union federations to maintain either restraint, or co-ordination of claims, in conditions of acute labour shortage; the individual unions have been caught between the long tradition of conformity with national policy, and the obvious market opportunities for large increases which many employers are only too willing to grant in current conditions. To resist the pressures from the workers has meant serious tensions within the unions and the risk of loss of membership.[13] The union federations have, indeed, recommended abolition of all government controls over pay, except its power to impose a temporary wage-stop in critical circumstances and to refuse to make binding a particular agreement. Thus responsibility for disapproving sectional agreements would fall on the Government, instead of on the union federations. On the employers' side, there is perhaps a less unanimous view, especially among firms which expect to suffer most from wage competition. But some large employers are prepared for a radical liberalization on the lines proposed by the union federations.[14]

The loss of "grip" over wage movements in the past two or three years has, however, been due not only to dissatisfaction with the mechanics of the system but also to the extremely heavy pressures within the economy. A period of calmer economic conditions may make it possible to work out new machinery which will retain at least some of the elements of co-ordination of pay movements which have proved valuable in the past.[15]

The future of the Dutch system is still undecided. The Social and Economic Council was invited in 1965 to consider a set of proposals by the Government which go a long way towards removal of formal controls. Under these proposals, consultations would take place between the Foundation of Labour and a few branches and enterprises regarded as "wage leaders". The Government would then discuss the position with management and union representatives in the hope of arriving at a "gentleman's agreement" for these "leading" sectors, in the expectation that other branches would follow a similar pattern. The need for validating collective agreements would be limited to certain general issues arising in such agreements, such as the minimum wage, reduction in working hours, movements towards equal pay for women, and cost-of-living indexation — because changes in these elements in the pay system, once started, tend to spread rapidly from branch to branch. The Government would also retain emergency powers to impose a wage-stop; but the existing penal sanctions on payments deviating from approved agreements might be given up. The attitude of the Social and Economic Council to all these specific proposals has not yet been defined in detail. But a report to the Government in September 1966 showed a considerable division of opinion in the Council.[16] The Council recommended, by majority, that the "testing" of collective agreements should remain the responsibility of the Government; individual agreements should continue to be submitted to the Board of Mediators, but should automatically come into effect unless the Board of Mediators, acting on general Government directives, took objection within four weeks. But a strong minority (mainly, it is presumed, the unions) held that agreements should no longer be subjected to "testing"; while recognizing that the Government bears ultimate responsibility for wage policy, they proposed that this should be exercised only as a last resort — by power to declare an agreement invalid or to impose a wage-stop, if the development of wages threatened to come into conflict with general policy objectives.

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[12] The original recommendation of the Council at the beginning of 1963 was a 2.7 per cent average rise — based on a somewhat pessimistic prognosis of the growth of the economy in the coming year. It proved impossible to hold this line in the face of pressures from both unions and managements. An additional 10 per cent was agreed later in the year within the Foundation of Labour, and the Government had to accept it (5 per cent to reduce the gap between wages in the Netherlands and those elsewhere, plus 5 per cent to reduce the gap between legal and effective earnings). Some large employers had already announced that they would ignore the legal wage limits, and provision was made in the agreement for "slight" deviations from the standard rate in individual plants. (See E. M. Bussey, "Recent Wage Control Policy in the Netherlands", United States *Monthly Labour Review*, May 1964.) The actual increase in average earnings (1964 compared with 1963) was 17 per cent.

[13] Although the proportion of wage- and salary-earners covered by collective agreements is very high (about 80 per cent), union membership covers only about 40 per cent.

[14] In fact Philips, the largest single firm, in 1965 entered a three-year contract providing for 5 per cent annual increases and a reduction in hours; this contract, which may be difficult to reconcile with any kind of annual central agreement on the "room" for wage increases, has been given official sanction after several months of hesitation. There was a similar agreement in the metal and engineering industries.

[15] Meanwhile, the pressures on wages and prices became more intense in 1966. In view of several sectional agreements exceeding the "norm", the Government announced in May that it would not for the time being approve any agreements providing for increases of more than 7 per cent.

Another immediate issue of some general interest has been considered by the Council. The unions have suggested that, so long as the pressures for higher wages remain intense, either the authorities are forced into approving excessive increases, or "black" wages appear, both of which create damaging tensions. As a compromise, they suggest that pay increases in excess of the amounts approved by the Government and the Foundation of Labour should be given in the form of a "savings wage" which could not, immediately, be spent. Such increments should be automatically validated by the authorities. The majority, however, point out that this would do nothing to moderate the rise in labour costs.

Decisions on these matters now (early in 1967) await an expression of Government views.

The probability of a continuing price increase is recognized in the medium-term plan (1965-1970) for the Netherlands.[17] Like the French medium-term plan (see p. 24), that for the Netherlands allows not only for some general increases in unit costs but also for some changes in distribution. Unlike the French planners, however, the Netherlands Central Planning Bureau put forward their projections as a realistic expectation rather than as an aim of policy. Thus labour costs per unit of output are in total expected to increase, in 1965-1970, by 13 per cent (24 per cent in services, 15 per cent in agriculture, 12 per cent in durable goods, but falling by 1 per cent in other goods); these estimates are based on projections for productivity and pay increases in individual sectors, which seem to be derived from an extrapolation of the relative changes in productivity and pay in the past.[18]

The Nordic countries — the significance of central negotiation

The central negotiation in the three Scandinavian countries and in Finland does not in itself determine the pay rates of the whole employed population, quite apart from the existence of the various forms of "drift". First, the central negotiation (as in the Netherlands) results essentially in a "frame" agreement setting certain limits to subsequent bargaining within the individual branches. Thus central bargaining sets the strategy and pattern for industry bargaining, or for bargaining at the local or enterprise level. It is not a substitute for sectional bargaining. Moreover, the central organizations, which have varying degrees of authority over their constituent branch organizations, take up their positions in the central negotiation only after considerable preliminary negotiations, on each side, with the constituent branch organizations. The trade unions and employers' central organs are federations, bargaining on behalf of their constituents. Thus in Sweden, after the first central negotiations, "it has been possible to incorporate in the co-ordinated wage agreements greater elements of differentiation, and the structure which they have, no longer makes it possible to argue that they are part of a rigid and irrational system of wage fixing. The LO's Wage Policy Council now functions as a preparatory body, helping the secretariat to draw up the guiding lines for some differentiations within the framework of a centralized wage policy. This also allows scope for direct negotiation at union level. . . . Finally there are local negotiations about the application of the agreements, and these fall to the local trade union organizations".[19]

Secondly, the organizations concerned in the basic central negotiation, on the workers' side, are the union federations concerned predominantly with manual workers: the LOs in both Norway and Sweden cover about half or less of the total employed population, in Denmark a greater proportion. In Norway there is a separate negotiation for most non-manual workers (including distributive) workers,[20] which, however, is heavily influenced by the outcome of the basic agreement for manual workers. In Denmark, Finland and Sweden, negotiations for non-manual workers are not centralized; in Sweden, especially, increasing unionization of clerical and professional workers, and their growing importance, have led to a certain competition in pay claims between these groups and considerable weakening of the central co-ordination of pay increases

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[16] Social and Economic Council, "Advies inzake het loonpolitieke stelsel", 1966.

[17] Centraal Planbureau, "De Nederlandse economie in 1970", 1966.

[18] *Ibid.*, Tables 4.33 and 4.34. The cost and productivity projections incorporate extensive analysis of a projected input-output table for 1970 and of the pattern of capital coefficients.

[19] From "Economic Expansion and Structural Change", edited and translated by T. L. Johnston, 1963, pp. 153-4. (A study submitted to the Swedish LO (the trade union federation) Congress in 1961, by a group of LO economists.)

[20] Non-manual workers in industry are covered by the basic negotiations.

(the recent dispute on the pay of academically qualified teachers being an example). In all four countries, pay changes in public employment are separately determined — but, again, normally following the lines laid down in the basic agreement.[21]

Thirdly, central negotiations in both Norway and Sweden have tended almost to alternate with decentralized negotiations. In Norway, the principle of central wage negotiations by the LO was authorized by the constituent unions only in 1949 (although there was a precedent in the "basic agreement" of 1935 between the LO and the Norwegian Employers' Confederation (NAF) covering many aspects of collective bargaining other than wages).[22] Since then, there have been seven central negotiations (generally for two years); in three years (1952, 1956 and 1961) negotiations were decentralized on an industry basis (in 1956 because the central negotiations broke down; in the other two years because the branch unions preferred to negotiate separately). In Norway, the employers have generally favoured a central agreement, and so has the Government; the unions have been more divided and the LO recognizes that there is some value in an occasional decentralized procedure under which unions who feel that their interests have been neglected at the centre can have the opportunity to strike a better bargain on their own. Moreover, the LO is aware of the risk that reliance on central negotiation, necessarily on a level remote from the membership, will lead to loss of interest in union activity.

In Sweden, the first formal central negotiation was in 1952 — on the initiative of the employers. This was an experiment, which was not repeated until 1956. Since 1956 a central negotiation has taken place on every occasion[23] except in 1959. Even before the introduction of formal central negotiation, however, the central organizations were able to exercise a strong influence on negotiations by co-ordination of the wage policy of their constituents. (The same is true, though perhaps to a rather lesser extent, in Norway.)

In Denmark, central negotiation, normally based on two-year agreements,[24] has been the practice during the whole postwar period.

In Finland, too, central negotiation has been the rule since the war, although more than once coming close to a breakdown. Industrial relations in Finland have been more troubled than in the Scandinavian countries and wage agreements more difficult to achieve; thus the abolition of price and wage controls, at a time of serious balance-of-payments problems, contributed to the general strike of 1956 which was settled only by Government intervention and a 12 per cent wage increase.[25] Again, negotiations for a new central agreement were broken off in 1965 and decentralized bargaining began. Again, Government intervention was needed before an agreement was reached on recommendations (made by the presidents of the major union federation and of the employers' association) for a scale of six-monthly increases in the following three years; these recommendations have been followed in most branch agreements.

Although, in all these countries, the positions taken on each side by the central trade unions and employers' organizations are agreed by negotiation among the members, and although the final agreement reached in the central negotiation is subject to approval and application by their constituent members, yet the central organizations themselves must be able to exercise considerable authority.[26] It is for them to attempt to reconcile the competing claims of their constituents. For the most part this authority of the central organizations is necessarily an informal and moral authority, rather than one that can be enforced by a book of rules. In Norway and Sweden, in particular, the trade union movement has developed almost from the beginning within a far more centralized framework than, for example, in Great Britain or western Germany. In Norway, both the trade union and employers' federations were established at the beginning of the century with considerable influence, at a time when the separate branch organizations were extremely weak. Indeed, on the employers' side, the industry associations may be regarded as branches of the central body.

However, the moral authority of the central organizations is strengthened by considerable formal powers. The central employers' organizations in Denmark, Finland, Norway and Sweden all have rules forbidding members to conclude collective agreements without approval by the centre. In Finland and Sweden, these rules are supported by power to penalize members in contravention by fines. In both Norway and Sweden the employers' central organizations hold a large disputes fund.[27] On the workers' side, the formal powers of the LOs are perhaps somewhat weaker. In Norway, member unions cannot conclude agreements or take strike action without LO approval. In both Norway and Sweden, the LOs, like the employers' centres, hold a large central disputes fund. In Sweden, the LO will not finance strike action in support of wage increases in excess of those laid down in the central agreements. In Denmark, there is not the same degree of formal central authority, possibly because of the union structure; unlike Norway or Sweden, the union movement in Denmark has been subject to a certain conflict of interests between the craft unions and the very large general union of unskilled workers. Member unions are able to enter agreements without LO approval. Nevertheless, the Danish LO has in fact been able to exercise a very substantial influence over the policies of member unions.

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[21] In Denmark, Norway and Sweden, the central trade union organizations are the respective LO (Land Organizations); in Finland, the major trade union federation is the SAK (Suomen Ammattiyhdistysten Keskusliitto) but there is in addition the SAJ (Suomen Ammatijürjestö); The two groups split in 1957 but both take part in the central negotiation; an amalgamation is now being considered. The main employers' organizations are the Danish (DAF), Norwegian (NAF) and Swedish (SAF) Employers' Confederations and the Finnish Employers' Confederation (STK).

[22] This "basic agreement" (as revised from time to time) is incorporated in every contract between firms and unions which belong to the two organizations.

[23] Some of the agreements (1957 and 1960) have been for two years, and in 1966 there was a three-year agreement.

[24] A three-year agreement in 1958.

[25] See the SURVEY for 1956, Chapter III, p. 32. More limited powers of price control were revived in 1957.

[26] In Norway and Denmark, but not in Sweden, agreements have hitherto had to be approved by a vote of the full membership. Thus the 1966 frame agreement in Norway, although approved by union representatives, was rejected by a rank-and-file vote; the matter was then referred to arbitration, and resulted in an increased award. In 1966, the largest union (the metal-workers') in Norway agreed that a special Contracts Committee should be empowered to enter an agreement on behalf of the membership (*United States Monthly Labor Review*, June 1966, p. 660).

[27] In Sweden, the central insurance fund of the SAF in 1964 exceeded $50 million and, in addition, member firms are committed to guarantees, for financing disputes in case of need, amounting to nearly $70 million. (Annual report of SAF, 1964.)

One other aspect of the procedures for central negotiation is important. This is that central negotiation implies a certain *simultaneity* in wage bargaining over the economy. It is to be expected that a series of more or less simultaneous settlements, for all branches, should lead to less competitive bidding-up of wage demands — to a less steeply inclined "wage-wage spiral" — than successive settlements in the different branches. Simultaneity of bargaining could, of course, exist without central negotiation.[28] In fact, it seems to have come into existence as part of the procedure for central bargaining — since a new central agreement automatically leads to a demand for revision of almost all existing agreements — and does not seem to exist elsewhere.[29] Simultaneity of bargaining may imply not only a regular "season" for bargaining in all branches together, but also that settlements are for a common period. Thus even when central negotation is not the invariable practice, the individual collective agreements, being for a fixed term, will tend to expire together.

At the same time, the publicity and, sometimes, atmosphere of crisis surrounding the central agreement cause it to produce a certain cumulative "demonstration effect". The central agreements, as pointed out, do not directly cover anything like the whole employed population. But they are so important that a sizeable centrally-negotiated increase will (*a*) encourage those outside it to claim, and probably to get, at least as much, and (*b*) encourage enterprises to put up prices not only because of expected cost increases but also in anticipation of the additional purchasing power released. The reverse may, it is true, occur if the central agreement is for only a modest increase (or for none).

There are similarities, too, in the content of the centrally-agreed pay settlements which distinguish them from the usual pay settlements where bargaining is decentralized. In particular, it has become normal in all four countries for increases agreed by collective bargaining — whether expressed as absolute amounts (which is more usual) or as percentages — to be applied to the actual *earnings* of the workers concerned, not just to the minimum or standard rates laid down in the existing collective agreements. The actual earnings include, of course, any extra amounts arranged at the local or enterprise level (i.e. the elements of "drift" in actual earnings). This principle, like some other features of pay settlements in the countries where central negotiation is normal, is not of course inherent in the process of central bargaining.

Central negotiation in relation to incomes policy

The characteristics of central bargaining which are most relevant to the problems of incomes policy seem to be three: a large degree of centralization of authority within the trade unions and employers' organizations; an inevitable involvement of government in the decisions; and an inevitable concern, on the part of the negotiators, with general considerations of economic policy. First, central bargaining implies that the trade unions, on their side, and the employers' organizations, on theirs, should be in a position to adopt a co-ordinated strategy both about the amount of any general wage increase proposed and about its distribution. In the Scandinavian countries, this general agreement on strategy, and a sufficient degree of central control of policy on each side, already existed before central bargaining was instituted.

Agreement on general pay policy does not, necessarily, of course, imply agreement on a policy of "restraint". It is perfectly imaginable that unions would use the monopoly power implied by central bargaining for pursuit of a highly "aggressive" or militant policy.[30] That this has not happened to any greater extent in the Nordic countries seems to be the result of the political moderation of the trade union movements in the countries concerned, and particularly of general agreement, especially in the Scandinavian countries, on the kind of economic system which is desired. This agreement is, perhaps, rather less marked in Finland — where pay increases and increases in unit labour costs were considerably greater in the 1950s, though not in the 1960s, than in the Scandinavian countries. The political responsibility of the unions has been reinforced by their association with social democratic parties participating almost continuously in Government (in Norway until 1965); in Finland, however, the social democrats took part in the coalition only until the party split in 1957, although they rejoined the Government in 1966.

Thus trade union movements have been in a position to exercise effective pressure for the improvement of living standards by their influence on social policy, as well as by wage claims.

Secondly, central bargaining on wages, once established, can hardly be conducted in practice without raising wider issues of economic policy. Consequently, the Government is inescapably concerned, directly or indirectly, with the outcome of the settlement.

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[28] In Sweden, leaders of the employers' associations pressed for simultaneity in collective agreements from the 1920s, especially to avoid competitive escalation.

[29] In Denmark, all agreements expire on 1 March (except for agriculture — 1 April); in Norway most agreements expire in the spring, but there are a few which habitually terminate in the autumn. In Sweden, most agreements in industry expire in February or March.

[30] To avert the danger of wage inflation in conditions of full employment, Beveridge suggested as early as 1944 that unions would have to adopt a more centralized policy on wage claims (Sir William Beveridge, "Full Employment in a Free Society" (1944), p. 199). It was suggested by Singer that the more centralized the bargaining, the stronger would be the pressure by unions; moreover, if all employers knew that their competitors would have to pay the same wage increase, the competitive reasons for resisting wage claims would disappear (H. W. Singer, "Wage Policy in Full Employment", *Economic Journal*, December 1947).

The extent and form of government influence varies widely.

In Sweden, the problems of putting into practice the principles of full employment policy began to be recognized in the 1930s. One of the main preoccupations of the Swedish workers' and employers' organizations has been precisely to *avoid* the need for Government intervention, and to establish a satisfactory system of "self-government".[31] It has long been agreed by both the LO and the SAF that the conditions for "free bargaining" include a clear recognition of certain wider social aims — the preservation of international competitive ability, the avoidance of price inflation and the preservation of industrial peace. It is not suggested that these aims have been successfully achieved (partly because of the inability to control wage drift). But a conscious effort to reconcile free bargaining with these wider aims, without invoking Government intervention, has deeply influenced both the machinery for negotiations, including the use of central bargaining, and the content of pay settlements. Both unions and management organisations are as emphatic as their counterparts in any other western European countries in their opposition to an "incomes policy" involving direct Government intervention in pay bargaining.

Formally, the Norwegian Government, like the Swedish, takes no part in pay negotiations. In practice, its influence is felt strongly behind the scenes.[32] This is largely because the LO-NAF wage settlements have been closely linked with policies for farm incomes and for consumer subsidies. Since the war, the principle of "parity" between agricultural and industrial incomes has been accepted by all parties.[33] This has been achieved by guaranteed prices to farmers, accompanied by subsidies, especially for milk and dairy products, the amount of subsidy playing an important part in determining the cost of living. Thus it has been possible for the Government to use an increase in subsidies to "buy" a moderate wage settlement, or to prevent the cost of living from rising above a critical point (as in 1963 and 1965).[34] At the same time, the drawbacks of a heavy subsidy bill are recognized,[35] and reductions of subsidies, leading to substantial rises in the cost of living, have been made so far as possible at times considered "safe periods" from the point of view of wage negotiation (e.g. in 1962 and 1964). The amount of subsidy to be provided has, in this way, become an element in the central pay negotiations and an instrument for the exercise of Government influence on the central pay negotiations. This practice of associating adjustments to price subsidies with pay agreements does not at present apply in the other Nordic countries.

In Norway, the Government has also, from time to time (as in 1966), resorted to compulsory arbitration when the negotiators have failed to agree.

In Finland, the link between pay movements and the cost of living — and food prices in particular since food represents nearly 40 per cent of the weights in the cost-of-living index — has been reinforced by the common use of price indexation in pay agreements.[36] At the same time, it is provided that agricultural incomes, depending largely on guaranteed prices determined by the Government, should rise "in parity" with industrial pay. Moreover, the present method of determining agricultural prices does not allow for the normal rise in agricultural productivity. The "leap-frogging" of agricultural prices and wages has thus been a significant element in cost inflation in Finland. It is possible that under the new political alignment — the Agrarian Party having lost some of its predominating influence — some changes will be made in the methods of adjusting agricultural prices and incomes.

In Denmark, Government intervention has taken a rather different form. The extensive use of official arbitration has for long been a feature of Danish wage machinery, and on several occasions, when the arbitrator's decision has proved unacceptable to one or both parties, the arbitrator's proposal has been enforced by law (requiring a special Act of Parliament). Until recently, however, the arbitrator's task was to arrive at an agreed settlement — not to determine what wage increase would be in accordance with general economic policy. It now appears to have been agreed by the unions and management that in future the Government arbitrator should be entitled to take into account general economic considerations.[37]

A more direct intervention by the Danish Government, resembling somewhat the Norwegian pattern, occurred in 1963 when the economic situation was considered critical. A modified "wage freeze"[38] was agreed on Government initiative, as part of a "package deal" incorporating a "price freeze" and a restriction on dividend incomes. The price control powers were repealed after less than a year. This Government intervention was an emergency operation, which met considerable opposition.

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[31] The Agreement of Saltsjöbaden, in 1938, between the LO and the SAF, establishing a basic framework for sectional collective bargaining, is commonly regarded as a major development in the establishment of this pattern of industrial relations.

[32] As stated officially: "In recent years, the Government has on several occasions helped in the achievement of a justifiable income settlement." ("Norwegian Long-Term Programme 1966-1969", *Parliamentary Report No. 63*, 1964-1965, p. 24.)

[33] It is generally recognized that parity in the level of incomes between agriculture and industry has not yet been realized — although the difficulties of measurement are considerable. (Indeed, so long as 85 per cent of agricultural holdings are less than 5 hectares, parity would be difficult to achieve.) But *changes* in farm incomes (and fishermen's incomes) are, so far as possible, at least kept in line with changes in industrial pay, and have often been greater. The relative increase in farm incomes is the major element in such redistribution of income as has occurred in Norway since the war.

[34] The central agreements have normally provided for an additional pay rise, or for the reopening of negotiations, if the cost-of-living index should by some future date rise above a specified figure (the "red line").

[35] The amount of subsidy to farmers regarded as a consumer subsidy (Kr. 900 million in the 1965 budget) is about 3-4 per cent of total consumers' expenditure. Foodstuffs are subject to turnover tax, and the subsidy is regarded as a subsidy to the consumer to the extent that it offsets the turnover tax on food. But for some individual items — such as those important to low-income families — the subsidy may exceed the tax, and *vice versa*.

[36] Continuous automatic indexation has given way in the last few years to provisions by which wages are adjusted only if the cost-of-living index exceeds a given level within a given period.

[37] Erik Hoffmeyer, "Incomes Policy in Denmark", *British Journal of Industrial Relations*, November 1964.

The third characteristic of central negotiation is that — whether Government intervenes directly or not — the negotiating parties must concern themselves with general economic considerations. Under sectional bargaining, it is possible to maintain the illusion that a particular pay settlement concerns only the two parties to the negotiation. The implications of changing the national pay level as a whole cannot so easily be escaped. In particular, the central negotiators in countries so dependent on foreign trade as the Nordic countries (or the Netherlands) cannot evade the implications for international competitiveness. Thus in all the countries where central negotiation is normal, provision is made for informing the negotiators of trends and prospects in the overall economic situation. The general business situation and prospects at home and abroad, the course of the balance of payments, the trends in prices, must all enter into the bargaining discussion, since all may influence the "room for wage increases". Of course, similar arrangements for keeping wage negotiators informed of the general economic situation exist in most countries where sectional bargaining is the rule, but can be set aside when the major considerations are those affecting a single branch of industry.

It has not been found easy to establish machinery which would allow co-ordination of pay settlements with general economic policy without arousing suspicion of Government intervention in the pay settlement itself. Under present Norwegian arrangements (since 1963), there is a "Contact Committee", under the Chairmanship of the Prime Minister, including other economic ministers, and representatives of the employers' organizations, trade unions and agriculture. The functions of this committee are (*a*) to agree on the *timing* of negotiations on wages and farm incomes, so as to reduce the danger of escalation of claims, (*b*) to examine the economic situation and the "room" for wage increases, and (*c*) to receive *information* from the parties concerned in wage and agricultural negotiations. The intention is to allow each group to determine its own strategy with proper knowledge of the attitude of the other interested parties including the attitude of the Government. A recent development is the institution of a group of four economic experts, from the Government, the LO, the NAF and the farmers, to get agreement on the economic facts and prognosis as a basis for discussion in the Contact Committee (including, for example, calculations of the effects on prices of alternative pay increases).

In Denmark, an advisory Economic Council representing trade unions, employers' organizations and agriculture was established in 1962, to discuss general economic problems. Its special feature is that a Board of three independent Chairmen is appointed, who can, on their own responsibility, make recommendations to the Government. These recommendations have included specific statements on the "room" for wage increases. Their latest statement,[39] for instance, suggests that overall pay increases in 1967 should be limited to 6 per cent. This allows for an inevitable price increase of about 3 per cent and a 3 per cent increase in output volume. But since cost-of-living indexation will anyway add 1½ per cent to pay, and drift probably another 2½ per cent, formal wage agreements should be limited to 2 per cent. For public employees, who cannot benefit from drift, a 2½ per cent increase is allowed for. The "wise men" also suggest that the Government should in future indicate its policy on agricultural prices and incomes before wage agreements are concluded. The report met with strong criticism from the unions.

One requirement, in any country with central pay negotiations, is that the secretariats of the trade union and employers' centres should include experts of high quality able not only to argue the facts of the general economic situation (in some countries, with the official experts as well as with experts on the other side of the table) but also — if the negotiations are to be efficiently conducted — to sort out issues of fact from problems of judgment and policy. The existence of a high quality secretariat for wage negotiations as for many other purposes is, clearly, one necessary condition for effective central control by the trade union and employers' centres.

Policies in the Northern countries for distribution of pay increases

Centralized bargaining — and, for that matter, a co-ordinated strategy for sectional bargaining — clearly implies the formulation of a policy for distribution of income gains among occupations and industries. The problem of holding the balance between competing claims is one that has confronted the trade union centres in all four countries; for the most part, it is the labour side which has taken the initiative in this matter.

It can hardly be said that any elaborate "incomes policy", in the sense of a policy for distribution of wage gains, has so far been formulated; there has certainly been nothing corresponding to the productivity-geared experiment in the Netherlands in 1959-1963. In the Nordic countries trade unions have fairly consistently adopted a policy of equal increases for all, but subject to one qualification. This qualification is the principle of "solidarity", to which the unions have for long attached major importance. The principle can be described as "equal pay for equal work", implying that wage levels should be determined by the nature of the work and not by the profitability, efficiency or commercial circumstances of the individual enterprise. It is thus related to the concept of the "standard wage" and goes far back into the origins of trade unionism in most countries of western Europe. The policy of solidarity — the abolition of wage differences between industries or occupations which are not regarded as justified by differences in work — is one reason why, for example, in Sweden, the unions have for long accepted a degree of central control by the LO.

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[38] The deal excluded from the wage freeze increases already agreed, increases for certain lower-paid workers, and increases for the cost of living (but the cost-of-living clauses were to be amended so that changes in direct or indirect taxes were not to be taken into account). Wage drift was not prevented but is thought to have diminished (E. Hoffmeyer, *op. cit.*).

[39] Økonomiske Råd, "Konjunktursituation", 1966.

The policy of solidarity has had two consequences: first, it has encouraged the use of systematic job evaluation to provide objective pay criteria; second, the implication that enterprises which are unable to pay the standard rates should go out of business is accepted. Willingness to see the disappearance not only of the less successful individual enterprises, but also of branches of industry which cannot meet international competition, has marked trade union policy, particularly in Sweden.[40] The answer to the structural problem is found not in protection of marginal enterprises or branches, but in an "active labour market policy" for promoting training and movement of workers into more promising employments.

In the context of central pay negotiation, the policy of solidarity has been fairly regularly applied by the provision of above-average increases for the less well-paid workers. This normally means specific provisions in central agreements either for larger increases in certain industries regarded as badly-paid, or for bigger increases for all workers at present below a certain level.[41] Recently, one method of application in Sweden has been to specify in the central agreement a series of "kitties" for each branch expressing as an absolute amount the agreed increase in the total wage bill; the union and employers' association within the branch could then negotiate on how to divide up the total "kitty" between the employees concerned.[42]

The relative importance of the special provisions for low-paid workers has not in fact been very large. Thus the "exceptions" in the Swedish agreements of 1960-1963 on average added only about 0.5 per cent a year to an average contractual increase of 3.2 per cent.[43] In Denmark, for example, in the 1956 agreement, about 20 per cent of workers got "low wage supplements" adding about 0.4 per cent to the total wage bill.[44]

But the application of the solidarity policy — like other aims of central incomes policy — has in practice been rendered almost abortive by the operation of wage drift. As will be shown in Chapter 5, the structure and dispersion of actual earnings, between industries and occupations, has in the event remained remarkably stable.

Price controls and incomes policies in the Northern countries and the Netherlands

It has repeatedly been urged, especially by workers' organizations, that no policy for regulating pay increases can be acceptable unless accompanied by regulation of other income, and especially of profits. It is generally accepted that control of prices is the nearest approach to controlling profits that is practicable (apart from taxation of profits after the event). Restraint on price increases is regarded as necessary for the application of restraint on pay rises not only as a kind of "political" *quid pro quo*, but also because of the potential direct influence of price increases on pay increases; if inflation can be described as a price-wage spiral, it follows that its course can be interrupted by action directed at prices as much as by action directed at wages.

In both the Netherlands and Norway, comprehensive machinery has existed throughout the postwar period for the control of prices. This machinery has been — and to some extent still is — regarded as an essential element in incomes policies. These are, in fact, the two countries in western Europe where most emphasis has been placed on price control as an instrument of policy, although it also plays a considerable role in Austria, Belgium and France (see below).[45] In Denmark, Finland and Sweden, price controls are not among the permanent apparatus of policy instruments. Two features are common to the Netherlands and Norway. In both countries, price controls are in practice operated for the most part by negotiation and voluntary agreement between the Government and producers, although both Governments have statutory powers to fix maximum prices if negotiations should fail (comprehensive in the Netherlands, partial in Norway). It is true that in both countries imported goods make up a very large proportion of total supplies on the domestic market (as in Denmark and Sweden too), so that prices cannot be completely insulated against the effects of price increases in supplying countries.[46] But t has been possible to use price controls (including control f distributive margins) to do something towards preenting rising import prices from pushing up the whole lomestic price structure.

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[40] "The trouble with the Swedish economy at present, despite the recent liberalization in trade, is not that it has too much or too little variety, but that it has far too much of the wrong variety." ("Economic Expansion and Cultural Change" (*op. cit.*), p. 97.) This statement of union views extends to recognition of the need to encourage imports from developing countries and to resisting protectionist arguments based on low wages in such countries.

[41] To some extent, this is achieved by the practice of fixing wage increases by equal absolute amounts (or by giving an absolute amount or a given percentage increase, whichever is the greater). But more specific arrangements are often made. For example, the Swedish central agreement signed (after considerable difficulties) on 1 April 1966 provides for general increases in hourly wages of 20 öre in 1966, 14 öre in 1967. In addition "low wage" workers receive an extra increase of 9 öre on average, but in 1966 only. An innovation of considerable significance in this agreement is designed to provide compensation for wage drift (a "wage development guarantee") to those benefiting least from drift. It is reckoned that drift will add an extra increase to a representative industrial worker, earning Kr. 7 an hour, of about 27 öre an hour. Workers whose wage drift in 1966 turns out to have been less than this will get extra increases in 1967 equivalent to the difference. (*International Financial News Survey*, 29 April 1966.)

[42] This method was adopted in the 1964 wage negotiations in Sweden, but was not repeated in the next agreement (1966).

[43] See K. O. Faxén, "Incomes policy in Sweden", *British Journal of Industrial Relations*, November 1964.

[44] OEEC, "The Problem of Rising Prices (1961)", p. 294.

[45] For a more detailed appraisal, see OECD, "Policies for prices, profits and other non-wage incomes" (1964); and OECD, "Non-wage incomes and prices policy" (1966).

[46] ". . . one of the greatest problems for the Netherlands is that in an open economy, open to other countries of the world, inflation cannot stop at the borders; and consultation in one's own country is no longer a guarantee against inflationary impulses". (P. A. Gille, of the Economic Section, Netherlands General Confederation of Labour (NVV) in OECD, "Non-wage incomes and prices policy", Supplement to the Report, 1965, p. 67.)

Powers of price control are most comprehensive in he Netherlands. Producers of all goods and services are equired to notify all price increases to the Ministry of Economic Affairs, together with a justification. For some pecified goods (now only bread, milk, margarine and uel) the Ministry must be consulted in advance. The eports of price increases[47] are scrutinized. Not all, of ourse, can be investigated in detail. In practice, the Ministry looks for patterns of increases which appear to eed inquiry. These are discussed with the responsible nterprises, or employers' associations; if the increases ppear unjustified, the Ministry will normally seek a voluntary agreement to modify them. Sometimes, indeed, he Ministry takes the initiative and proposes a price eduction when external costs are known to have fallen.

The exercise of persuasion is, however, backed by compulsory powers. The Minister has power to impose a "price stop" by fixing maximum prices. This power was used quite extensively in 1963-1964 when the pressures on prices and wages were severe; in early 1965 over 20 branches were subject to price stops. In May 1966, when the pressures on wages and prices and on the balance of payments were again building up, the Minister announced that no price increases would be approved for the time being unless justified by rising non-wage costs, at the same time calling for a 7 per cent ceiling on wage increases.[47a] Moreover, most rents have been kept under egal control.

In Norway, as has been pointed out, the consumer subsidies on food are used by the Government as an mportant way of influencing pay negotiations. In addition, direct price controls of various kinds are said to cover about half the cost of living. For the most part, the control means that certain prices[48] may not be increased without approval of the Price Directorate; for some commodities, also, maximum prices have been laid down.[49] In addition, the great majority of rented houses are still subject to rent control, and the sale of land is supervised (in most areas). Apart from rent control, the general tendency in Norway has been to reduce the extent of Government supervision of prices; but the reserve powers to control at least some prices are still regarded as an important supplementary instrument of economic policy.[50] Price control in Norway was until 1960 accompanied by dividend control (dividends being limited to 5 per cent of paid-up capital unless special permission is given). In addition to limiting property incomes, the original purpose was to stimulate self-financing of the considerable investment drive, and was supported by provision for exemption from tax of appropriations to reserves on condition that expenditure from these reserves is officially approved.

Price controls in Denmark have not been used as a permanent instrument of policy. The Monopoly Control Authority (since 1955) has powers to require advance approval of price increases for certain products,[51] and has powers to fix maximum prices (used only for certain kinds of bread). More extensive, but temporary, powers to control prices were, however, created to deal with the emergency situation of 1963. Special legislation imposed a two-year "price stop" — prohibiting price increases unless they could be shown to be justified by rising costs,[52] in conjunction with a "wage stop" and a limitation of dividend increases. The legislation was in fact repealed in less than a year, but powers are retained for instituting inquiries into specific cases.

In Finland, the Government has power to set maximum prices for a number of groups of goods (mostly consumer-goods); these powers were taken under a one-year Act in 1957, which has since been renewed annually. Prolongation of price controls to 1970 is now under consideration.

General price control powers do not now exist in Sweden. In general, the philosophy of the Swedish labour movement now places only minor emphasis on the effectiveness of direct controls, favouring rather the promotion of rationalization, competition, publicity and consumer information.[53]

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[47] For instance, in 1964, there were submitted to the Ministry 1,800 reports of price increases.

[47a] Replaced in December 1966 by reversion to compulsory notification.

[48] Commodities whose prices are determined by private monopolies or producers' agreements (cement, beer, magazines, tobacco).

[49] Milk and dairy products, most kinds of meat, bread and flour, vegetables (in certain market situations) and public transport. Also, increases in retail margins for certain products (clothing, some foodstuffs) must be notified, and there is power to prohibit increases; but this power has not been much used recently.

[50] "The direct price and profit controls that have existed and in some cases still exist have certain obvious advantages. The controls operate rapidly, directly and selectively. In the fixing of maximum prices, for instance, particular stress has been laid on the level of costs in rationalized and efficiently operated establishments. . . . The very existence of a price administration and a Prices Act may also be expected to exert a certain preventive influence on speculative tendencies. . . . One of the important purposes . . . is precisely to counteract *unreasonable* prices and *undue* profits which might otherwise have resulted from the economic situation in the sector concerned." Kjell Holler (Director of Economic Bureau, Norwegian LO) in OECD, *op. cit.*, p. 76. Dr. Holler goes on to detail some of the drawbacks, notably the longer-term disadvantages of interfering with the distributive function of an organized economy. "It is this experience that dictates the flexible form of price policy which characterizes the directives of the present day" (*Ibid.*, p. 77).

[51] Bread, milk, margarine, dairy products, beer, cigarettes, certain services, and some other common goods and some industrial materials.

[52] Increases in wage costs in excess of those provided by collective agreements were to be excluded in calculations of cost increases.

[53] "Price controls in the strict sense ought not normally to be used in an economy where imports are free and there is an ample supply of goods." But "permanent and active surveillance of prices is necessary in addition and, in the last resort, it ought to be possible to use price controls as an ultimate corrective". From "Economic Expansion and Structural Change", edited and translated by T. L. Johnston, 1963, p. 115 (a study submitted to the Swedish LO Congress in 1961 by a group of LO economists).

4.2. Other Approaches Towards Co-ordination — Austria, the United Kingdom and France

Outside the Nordic countries and the Netherlands, approaches towards establishing an incomes policy have involved much less drastic changes in the modes of determining pay changes. There are, however, three countries — Austria, the United Kingdom and France — where diverse efforts have been made, with different degrees of effectiveness, to introduce elements of voluntary co-ordination into decentralized systems of pay determination.

Austria

For most of the postwar period, pay and prices in Austria have been subject to some form of central co-ordination and Government influence. The present system, which has passed through several phases, embodies both a certain element of control exercised by the central labour and employers' organizations, but in a different form from the central bargains of the Nordic countries, and also an element of Government intervention although much less formal than that in the Netherlands.

The Austrian system is, in part, the product of certain special characteristics of Austrian politics and social organization. First, from the end of the war until the defeat of the Socialists in the general election of 1965, Government has been conducted by a coalition of the two large and evenly-balanced parties — the Peoples' Party and the Socialist Party. In internal economic affairs, policy decisions have consisted largely of a perpetual series of compromises between the opposing views of these two parties. This has facilitated, among other things, a certain interplay between price regulations and wage policies. Secondly, economic life in Austria has traditionally been characterized by a comprehensive system of legal organization: this is the system of "economic associations", for management, labour and agriculture, of which membership is compulsory and more or less universal for employers and employed persons.[54] These associations exercise a very strong influence on policy; the Chambers of Labour are closely linked, in their sympathies and their leadership, with the trade unions. There are, similarly, close relations with the political parties — the Chamber of Commerce and Industry, and of Agriculture, having their links with the Peoples' Party, and the Chamber of Labour and the trade unions with the Socialist Party.[55] So far, it appears that the system of co-operation has survived the disappearance of the Socialists from the Government coalition.

At the same time, the trade union organization is somewhat centralized. The trade unions were rebuilt after the war on the basis of a strong central Trade Union Federation, with 16 constituent unions organized by branches of industry. The Federation also has provincial branches and district secretariats which secure close co-operation with the unions at local level and also with the works councils. As in the northern countries, the Federation holds a central strike fund. About two-thirds of the employed workers are trade union members.

This rather tightly-knit organizational structure has greatly influenced the organization of pay bargaining; it has, by and large, encouraged the resolution of conflicts of interest by well-balanced compromise. For two or three years after the war, during the period of reconstruction, there was tight official control of both wages and prices, passing from the occupation authorities to the Austrian Government. But in 1947 the controls were unable to resist the inflation of prices. A considerable general wage increase was negotiated by the Trade Union Federation. Together with the monetary reform in 1947, it succeeded in securing a period of relative stabilization. From 1947-1951, four more central agreements were negotiated. From 1951, however, pay settlements reverted to sectional bargaining; for a time these operated smoothly — in conditions of relative depression after the Korean War — but the boom of 1954-1955 led to the obvious danger of renewed inflation.

An initiative by the Austrian Trade Union Federation — alarmed by threatened increases in prices (and particularly in the price of beer) — led to agreement in 1957 on a new system for co-ordinating wage and price changes. The system, although established in the first place to deal with an immediate threat to stability, has in essence and with certain modifications and development remained intact.

The main organ is the Joint Wage and Price Commission, on which sit four Ministers (two from each party in accordance with the "Proporz", the Chancellor and the Minister of the Interior presiding alternately), together with representatives of the Chamber of Commerce and Industry, the Chambers of Labour, the Chamber of Agriculture and of the Trade Union Federation. By voluntary agreement, and with no sanctions, all proposals for changes in collective agreements are referred to the Commission and the Commission's decisions have been accepted.

The procedure of the Commission is adapted to the Austrian practice of sectional pay bargaining. A union proposing to put forward a pay claim first submits it for examination by the Commission.[56] The Commission has no power to approve the claim as such; all it can do is to authorize the union to begin bargaining with the relevant employers’ association. When agreement is reached, its terms are again submitted to the Commission. The Commission is thus in a position to express its view at two stages.[57]

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[54] At the Federal level, the associations are grouped into the Federal Chamber of Commerce and Industry, the Austrian Congress of Chambers of Labour, and the Conference of Austrian Chambers of Agriculture. Each has a structure of provincial, local and branch Chambers. The Chambers of Labour are in law completely separate from the trade unions.

[55] One Chancellor was formerly President of the Federal Chamber of Commerce and Industry and Chairman of the Peoples' Party. One Socialist Minister of Social Affairs was president of the largest union and also very active in the Chamber of Labour. For a fuller description of the system see M. Edelman, "National Economic Planning by Collective Bargaining", University of Illinois, 1954; and Anton Proksch, "The Austrian Joint Wage and Price Council", *International Labour Review*, March 1961.

[56] Most cases are dealt with on behalf of the Commission by its Wages Committee.

Claims and agreements are not normally rejected by the Commission. Its technique is, rather, to suggest on occasion a modification of a claim, or, rather more often, a postponement of a claim or of a settlement, or a reference to an *ad hoc* committee for further examination. It is a “technique of appeasement and delay”.[58] The effectiveness of this informal method depends in large part on the Trade Union Federation which has the responsibility for defending the claims of the individual union within the Commission. The Federation is able to select from the claims submitted those which it regards as the most deserving.

Although the Commission has not been guided by formal criteria, its operation has thus been deeply influenced by the social philosophy of the Federation, which has stressed the policy of “solidarity” — the strong unions supporting the weaker ones in their claims, or pursuing certain social goals (keeping down price increases, improving social services, better pensions, etc.) at the cost of delaying or reducing pay increases. The Federation has, for example, deliberately pushed wage claims in industries where economic conditions were unfavourable, at the expense of claims which might more easily have been won.[59] The agreement of 1960 did, indeed, stipulate that permission to bargain should not readily be given in cases where a wage increase would necessitate a substantial price increase; but this principle, implying the gearing of pay increases to productivity in the branch concerned, does not seem to have been strictly observed.

As between occupations, the tendency since the Commission began to operate in 1957 has been to widen somewhat the pay differentials between the skilled and the unskilled (reversing the effective maintenance of the status quo in the previous ten years after the war). On the other hand, women’s rates, which had been rising more slowly than men’s rates up to 1956, were allowed to rise after 1956 as fast as those for skilled men and faster than for unskilled men.[60]

Equally important is the power of the Commission to influence prices, and it seems probable that price regulation in Austria is as extensive as anywhere in western Europe. To begin with, prices of certain basic foodstuffs (bread and flour products, milk, butter, sugar, some cheese), of mineral fuels and their derivatives, of electricity and gas, and of essential pharmaceuticals, are controlled directly by the Government. Apart from these products (on which the Commission may advise the Government) the Commission itself may make recommendations on prices of any goods or services although, effectively, its influence is limited to goods and services for which it is possible to obtain sufficient information for a decision. The procedure is similar to that for pay increases — except that the Commission now has certain compulsory sanctions. Firms proposing to increase prices submit them for examination to the Commission’s Prices Committee, which examine them from the point of view of “whether the increases were necessitated by a rise in costs which cannot be offset by rationalisation measures or productivity increases”.[61] The decisions may tend to be somewhat impressionistic, since there is no obligation on firms to submit detailed data on cost factors or demand trends. The Commission has, however, been able to modify or delay applications, and to persuade applicant firms to absorb some part (usually about one-third) of cost increases.[62] The results of these wholly voluntary arrangements were not entirely satisfactory. In 1962, the powers of the Commission over price swere strengthened.[63] Where prices are increased without application to the Commission, or if the Commission’s recommendations are not observed, the Commission may request the Minister of the Interior to submit the commodities concerned to statutory price regulation for a period of six months. This sanction can be applied where the offending firm has a dominant position in the market, or where the proposed price increases extend over a whole branch of industry. The sanction has never, in fact, been applied, since it has always been possible to find a compromise solution.[64]

In these ways, the Commission has been able to coordinate price and pay policy within certain limits. (For example, in July 1962, when prices and wages had been rising rather fast, it was possible to negotiate a joint

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[57] The volume of business of the Commission in the field of pay claims is considerable and continuous, since there is no provision in Austria for agreements to be renewed or amended simultaneously. During 1964, 56 new “basic agreements” (covering the whole range of employer-worker relations) and 371 “additional agreements” (modifying some part of the basic agreements), three quarters dealing with pay changes, were concluded, some covering the whole country, others for one or more of the 9 provinces only, and others for smaller areas. Some 2,600 different pay rates are stipulated by the agreements. See *Statistische Nachrichten*, July 1965, pp. 332-334.

[58] E. März, “Zur Problematik des chronischen Preisauftrieb”, *Studien zur Problematik der paritätischen Kommission für Preis-Lohn-Fragen* (edited by T. Pütz), Vienna 1961, p. 60.

[59] For example, in the second round of wage claims, in 1958, the Federation concentrated on securing authorization for bargaining in the textiles and clothing industries, commerce and the hotel and catering trades. Proksch, *op. cit.*, p. 240.

[60] Index of net minimum hourly wage rates (excluding child allowances; Vienna).

	Men		**Women**	**Total**
	Skilled	Unskilled		
1956 *(1945 = 100)*	110.0	110.7	107.2	109.3
1964 *(1956 = 100)*	147.6	139.5	147.2	145.2

Source: from indices in *Statistisches Übersichten*.

[61] K. Wenger, “Die paritätische Kommission für Preis und Lohnfragen”, T. Pütz, *op. cit.*

[62] In the period March 1957-September 1963, 1,071 price applications were dealt with. In all cases, some price increase was approved. M. Hohenecker, “Die Preiskontrolle der paritätischen Preis-Lohn-Kommission”, *Monatsberichte*, May 1964.

[63] Previously, the Price Speculation Act of 1958 gave the Commission the very limited power of acting with “expert status” in the determination of “normal” prices of commodities under the supervision of the Ministry of the Interior.

[64] H. Kienzl, “Prices Policy and Incomes Policy in Austria”, in OECD, “Non-wage incomes and prices policy”, Supplement to the Report (1965).

agreement freezing prices and wages for three months, subsequently extended for another three months.) The trade unions in Austria have throughout attached great importance to the price-regulatory function of the Commission and take a very active part in it. Since access to firms' accounts is not provided for, the unions take steps to check the information provided from their own sources, taking the view that the elaborate professional organizations which are characteristic of Austria, together with tariff protection, encourage monopolistic behaviour.[65]

Although originally intended to deal with price and pay questions only, the Commission was charged in 1962 with the additional duty of advising the Government on all aspects of economic policy. This met the wishes of the trade unions which since the birth of the Commission had aimed at developing it as a body with influence in the determination of economic policy generally. To carry out their responsibilities, the Commission was further assisted in 1963 by the formation of the Advisory Council for Economic and Social Questions (the "Beirat"). The Advisory Council includes members of the economic associations, acting as experts rather than as representatives, but no official Government members. Its recommendations are submitted to the Government through the Commission. The Advisory Council has not taken an active part in wage and price policy but it exercised an important influence in the elaboration of the stabilization programme of 1964, which was based on a variety of measures for restraining domestic demand.[66]

The effort to restrain pay and price increases since 1957 must be seen against the general background of substantially lower levels of unemployment (Table 3.1). As a proportion of the labour force, unemployment fell from 9 per cent in 1953 to about 5 per cent in 1956. The first years of the Commission's work were marked by a further reduction, to between 2½ and 3 per cent throughout the years 1961-1965. In these circumstances a rise in the average annual rate of increase of conventional pay rates from 4 per cent in 1952-1958 to 6½ per cent in 1958-1965 appears normal — evidence neither for or against the effectiveness of the new system.

At the same time, wage drift increased substantially. In 1952-1958 drift had already added 1 per cent a year to the increase in conventional rates. In 1958-1965 drift increased to 2 per cent a year.[67] The prevalence of wage drift — often the result of special agreements made in the individual plant without union participation, but through the works council *(Betriebsrat)* — has caused concern to the unions. Efforts have been made to overcome the problem by incorporating in the collective agreements not only minimum rates but the effective pay rates actually in force *(Ist-Löhne)* — which should imply much lower percentage increases in actual earnings than in the minimum rates. The overall figures suggest that these efforts have not, in fact, been successful.

The United Kingdom

While the most elaborate system for administering incomes policy in western Europe — that in the Netherlands — is being eroded, efforts are being made to establish an equally complex system in the United Kingdom. Within the last two years — after a number of short-lived and rather unpromising experiments — a new system, still in a state of flux, has been developed in Britain; it is based on voluntary co-ordination supplemented by official intervention in specific cases as they arise, and backed, but only temporarily, by statutory power under which the Government can enforce maximum levels of pay and prices where voluntary acceptance is refused.

The background to incomes policies in the United Kingdom is a long-standing system of collective bargaining marked by three features. The first is a long tradition of independent sectional bargaining, associated with relatively weak central organizations on both sides (the Trades Union Congress[68] and the Confederation of British Industry[69]) and associated, too, with the strongest resistance to Government intervention. Even during the war, it was found impossible to introduce any general statutory control of pay. The second feature is the voluntary character of collective agreements: thus agreements are not "contracts" in the legal sense, as they are in many countries, and so cannot be enforced by law[70] (which is one reason for the difficulty of dealing with strikes in contravention of agreements); most agreements, too, are for indefinite periods, and can be reopened at any time, although there has been some tendency recently to enter into agreements for two- or three-year periods. The third feature is an organizational structure on the trade union side which is partly occupational, partly industrial, with, in some cases, unions competing for membership in the same field; as a result, there is no tidy alignment of workers' and employers' organizations (the latter being essentially on an industrial basis). Many agreements for a single branch of industry involve a number of separate unions. The first of these characteristics has made it exceedingly difficult to persuade unions to co-operate in any co-ordination of pay claims, whether proposed by the TUC or by the Government. The second and third greatly increase the practical difficulties of applying any co-ordinated policy.

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[65] The statistical department of the Vienna Chamber of Labour makes its own surveys of price trends (H. Kienzl, *op. cit.*).

[66] For a description of the Council's proposals see OECD, *Economic Surveys, Austria* (May 1965).

[67] Thus in 1962, actual average earnings (excluding overtime pay) were 12½ per cent greater than minimum rates in textiles, and 30 per cent greater in metal-working (*Monatsberichte*, No. 1, 1963, pp. 26-27).

[68] The TUC, through its General Council, does not normally intervene in employer-worker disputes unless requested to do so by an affiliated union, although it is able to do so. In disputes between unions, the General Council may intervene only when requested by an affiliated union. The number of separate unions (of which 170 are affiliated to the TUC) is about 600. Membership covers about 40 per cent of the labour force.

[69] The CBI, established in 1965, amalgamated three employers' organizations: the Federation of British Industries, the National Association of British Manufacturers and the British Employers' Confederation (before the amalgamation, only the last of these bodies dealt with wages and labour relations).

[70] Unless the terms of the collective agreement are expressly or by implication incorporated in the individual contract between an employer and an employee.

In none of these characteristics is Britain unique; she has at least escaped the much more fundamental impediments to an incomes policy which arise when the union movement is split (as in France or Italy). Yet the strength of the attachment to voluntary arrangements, to autonomy and to existing institutions is, perhaps, more marked — on both sides — in the United Kingdom than elsewhere. The basic philosophy on these matters has been expressed by Mr. George Woodcock, General Secretary of the Trades Union Congress: "Relations in industry . . . are much more like a marriage between a man and a woman than any other contractual relationship within the law of this country."[71] Thus the Government has hitherto had no formal power to control prices or pay (apart from the prices of public services and the pay of the Government's own employees).[72]

Notwithstanding these obstacles, a number of efforts have been made by governments, with varying success, to put into effect some kind of control and co-ordination of pay movements and of prices, entirely on a voluntary basis. More than in other western European countries, these efforts have been stimulated particularly by the balance-of-payments difficulties to which the British economy has been subject. Hence the actions taken have until recently tended to be emergency measures, to meet a particular crisis; and even the more fundamental actions taken by the Labour Government which came into power in 1964 have been more heavily influenced by the balance-of-payments problem than by a wish to change the basic machinery for pay determination.

The desirability of developing a clear policy for pay determination was urged by some elements in the first Labour Government of 1945-1950 but met considerable opposition. It was only in 1948 — following the "convertibility crisis" of 1947 — that the unions were persuaded to acquiesce in restraint of pay claims, while surviving war-time powers were used to check price increases, and companies were persuaded not to increase dividends. This had some success. Negotiated wage increases were checked although drift continued. But the trade unions felt obliged to terminate the understanding at the end of 1950, when the Korean War, following devaluation, made it impossible to hold prices.

Until 1964, this was the only example of wage restraint to which the unions subscribed.[73] Two further efforts were made, by Conservative Governments, in 1956 and 1961, to get voluntary agreement for a temporary "pause" in increases of pay and prices but the unions refused any formal co-operation. The unions also refused to co-operate with two successive advisory bodies set up by Conservative Governments in 1958 and 1962 to take evidence and issue reports on incomes, prices and productivity.[74] In 1961, after much hesitation, the Trades Union Congress agreed to take part in the National Economic Development Council — a new consultative organization appointed by the Government, with Ministers as well as management, unions and independent experts among its members and with a strong staff. The purpose of the NEDC was to promote economic growth and to elaborate a national plan; it was not, however, expected to concern itself in any detail with incomes policy.

In 1964, a Labour Government came into office, deeply committed to a new effort to introduce machinery for an incomes policy to accompany the promotion of faster economic growth. The economic background at that time was one of rising demand — a cyclical upturn had been in progress for a year and a half and pressures were appearing; the overall balance of payments had once more fallen into heavy deficit. In somewhat unpromising circumstances, the new Government — and particularly Mr. George Brown, the Minister for Economic Affairs —bent their efforts to securing an effective, but still voluntary, control of pay and prices.

The first stage was a "declaration of intent" made at the end of 1964, and recording, after considerable negotiations, the willingness of unions and management representatives "on behalf of their members" to co-operate with the Government both in setting voluntary "norms" for judging price and income changes, and also in operating machinery for reviewing such changes.[75] The "norm" for future increases in earnings per head was agreed, for the time being, to be 3-3½ per cent a year — a figure based on the estimated trend of productivity growth. (The "norm" made no allowance for either past or inevitable future increases in consumer prices, and thus implied — since prices had been rising by about 4½ per cent a year — that unions whose last agreement was a year or so ago would have to accept reductions in real wage rates.) Although the Government emphasized that the voluntary method, and the pressure of public opinion, would be given every chance, it added that it "would resort to other methods only if they were convinced that the voluntary method had failed".[76]

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[71] Trades Union Congress 1965, *Report*, p. 470.

[72] Except for the prices of steel and milk (both for special reasons). Statutory powers in respect of pay were limited to the setting of minimum wages in certain industries. As shown below, temporary powers to control both prices and pay were taken in August 1966.

[73] Even in 1948-1950, the restraint on the part of the unions was due to understandings with the leading personalities rather than to formal resolutions of the Trades Union Congress.

[74] The first of these was the Council on Prices, Productivity and Incomes which issued reports in 1958 (two reports), 1959 and 1960, dealing with general issues of incomes policy. This was superseded by the National Incomes Commission (1962-1964) which made inquiries, and issued four reports, on specific wage agreements referred to it by the Government. Both bodies consisted of independent persons, without Government representation.

[75] The Trades Union Congress had already accepted the principle of an incomes policy, regarded as a policy for "the planned growth of incomes". "Congress has, therefore, acknowledged that a realistic solution might well involve the avoidance of excessive increases in incomes, but has also asserted that negative policies of wage restraint are irrelevant and unacceptable, and has insisted that the trade union movement could co-operate in a policy for prices and incomes only if it was part of a general plan for the faster growth of real incomes." (From "Productivity, Prices and Incomes" (TUC). Report of TUC General Council approved by Conference of Executive Committees of Affiliated Organizations, April 1965.)

[76] *Machinery of Prices and Incomes Policy* (Cmnd. 2577) — issued in February 1965, and outlining the machinery to be used.

The National Board for Prices and Incomes

In accordance with this agreement, the Government set up the National Board for Prices and Incomes, to review, when requested by the Government, selected cases of increases in prices or pay (whether proposed or already agreed by the parties). The Board is to examine each case in the light of the "norm" and of certain criteria agreed by the Government with management and unions.[77]

The Board can make recommendations to the parties, but the Government has no statutory powers to enforce them. Pressure on firms and trade unions can be exercised only by persuasion and by the considerable publicity given to the Board's inquiries and reports.

The Board was plunged deep into a sea of group interests, established institutions and strong traditions — the strongest tradition being the reluctance to accept intervention. Nevertheless, within the limited field which it has been able to cover, the Board has been able to exercise a moderating influence. Its recommendations have not always been fully implemented; but they have not been ignored, even when criticized, by the interested parties.[78]

In its first year and a half of operation (up to November 1966) the Board has reported on 20 cases, about equally divided between price increases and pay increases, and covering a wide range of industries and income levels.[79]

Throughout, the Board has taken the broadest possible view of its functions. It has not regarded itself simply as an arbitrator or conciliator — simply finding a common ground between the parties; nor as a quasi-judicial body — seeking decisions in the light of precedent; nor as performing an accountancy check — determining whether a given price rise is arithmetically justified by a change in costs. These considerations have been present in the Board's reports, but the main emphasis has been on ways of improving the price structure, the pay structure, the operating methods, and the attitudes of the industry concerned. To a limited extent, the Board has been able to engage in a kind of private "negotiation" with the interested parties (facilitated by hearings in private).[80]

Thus, in price cases, the Board's purpose has been to prevent the automatic habit of passing on cost increases into prices; it has proposed (and has secured) postponements of price increases or their modification, urging producers meanwhile to take specific measures for reducing costs. On pay cases, the Board has urged that changes in operating methods which would improve productivity should be associated with pay increases; it has put particular emphasis on reducing the amount of overtime working.[81]

At the same time, the Board has attacked with some force certain aspects of the "comparability" arguments so frequently used in pay claims. Thus in the case of bank clerks, the Board rejected as irrelevant the staff argument that current relative pay is less than it was 30 years ago, and suggests that the only relevant consideration is the present pay of comparable workers.[82] In the case of electricity clerks, the Board felt obliged to accept in practice the clerks' claim to maintaining parity with manual workers in the same industry, while disapproving the principle in the hope of modifying future practice.[83]

In the United Kingdom, as elsewhere, a large proportion of pay scales, especially in the public services, is determined by "comparability" with pay in private industry. But the methods used by various separate committees and tribunals, and in different agreements (although assisted by the fact-finding work of an official Pay Research Unit), have been diverse and unco-ordinated. The National Board has the opportunity for evolving a coherent system where one is required. Thus, the principle had often been to interpret comparability by looking at the conventional rates for given occupations under collective agreements, ignoring the existence of much higher earnings due to "drift". This had led to a substantial sense of grievance among many groups of workers, especially in certain nationalized industries and public services. The Board has been moving towards more realistic comparisons with actual average earnings[84] — even though it is rarely possible to find data about actual earnings in specific occupations, and a more aggregative basis for comparison has to be accepted.

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[77] The criteria are set out in *Prices and Incomes Policy* (Cmnd. 2639). Thus, on pay, certain circumstances are defined — very broadly — in which wages may have to rise by more than the norm where it is the only way to secure a change in manpower distribution that is "essential in the national interest"; where "existing wage and salary levels are too low to maintain a reasonable standard of living"; where . . . "the pay of a certain group of workers has fallen seriously out of line with the level of remuneration for similar work and needs in the national interest to be improved". The White Paper also urges that in wage bargaining more weight must be given to the "norm", and less to such factors as changes in the cost of living, comparison with other industries, trends in productivity and profits, and changes in supply and demand. Similarly, on prices, enterprises should not raise prices unless productivity cannot be increased, or non-labour costs or profits reduced, enough to absorb pay increases in accordance with the pay criteria; or unless there are unavoidable increases in non-labour costs, etc.

[78] In only one case (London bus workers) has there been a refusal to co-operate — by the Transport and General Workers' Union, whose refusal arose from the reference to the Board of a wage-claim which had already been agreed.

[79] On *prices:* bread and flour, soap and detergents, private road haulage, electricity and gas (certain regions), coal, beer, laundries and dry cleaning, coal distribution, Building Society mortgage interest. Under consideration: bank charges, motor repairing, aluminium. On *pay:* electricity clerical workers, Midland Bank staff, British Railways, Government industrial workers, bakers, higher civil servants, Armed Forces, municipal bus workers, Scottish teachers. Cases now under consideration: electrical contracting; four groups of lower-paid manual workers, viz. National Health Service, local authorities, gas, water supply; productivity agreements in general. *Prices and pay:* printing. For activities up to July 1966, see National Board for Prices and Incomes, *General Report* (Cmnd. 3087), 1966.

[80] "The purpose of an incomes board is to give expression to this interest of society in a reasonable dialogue with the participants in a bargain and to induce them to take into account a wider view." (Mr. Aubrey Jones, Chairman of the National Board, at Industrial Welfare Society (*The Times*, 22 September 1965).)

[81] For example, for bus workers, more rapid acceptance of one-man buses and standing passengers, in certain conditions, in cities — changes which the union had been very slow to accept (Report No. 16 of NBPI, Cmnd. 3012); for bakers, a rise in the standard wage rate for a normal week was recommended but the possibilities of cost-saving by reducing overtime (currently about 12 hours a week) were heavily emphasized (Report No. 9 of NBPI, Cmnd. 2878).

[82] Report No. 6 of NBPI, Cmnd. 2839.

[83] Report No. 5 of NBPI, Cmnd. 2801. In another case, the Minister asked the Board to report on whether a certain increase in the pay of teachers in Scotland would put them "generally into a fair relationship with teachers in England and Wales". The Board rejected this criterion proposed by the Government, saying it would be necessary to make a separate examination of each group; an overall comparison between two educational systems would be wrong in principle (Report No. 15 of NBPI, Cmnd. 3005).

Several references to the Board — in the face of objections from some of the interested parties — have concerned agreements already made by the employers and unions concerned, or decisions reached by existing procedures for setting pay.[85] Although the Board's reports in these cases have not recommended alterations of the agreed pay increases, the Board has suggested different principles for future settlements.

It will be seen that the Board has so far been concerned with very much wider issues than enforcing the overall "norm". Essentially the Board has been trying to induce more progressive and efficient methods of determining pay and prices: "Since we regard ourselves not just as judges of past events but as intended to influence the shape of things in the future, we also consider it our responsibility to inquire into any methods that can promote a faster rate of increase in productivity in the industry under examination, this being indispensable if the industry is in future to accommodate desirable increases in wages without however passing those increases on to the consumer."[86]

The "Early Warning" system

Continuing increases in pay, pay claims and prices during 1965 seemed to the Government to show insufficient results for the efforts so far made. The Government began in the summer of 1965 to negotiate with unions and management for establishing more comprehensive machinery than the National Board, which could cope only with a small selection of special cases. The Government first attempted to persuade the employers' central organization, the Confederation of British Industries, to examine and report on price increases and the Trades Union Congress on pay claims; its hope was that these central bodies would be able to induce restraint by their members. Both bodies proved extremely reluctant. The CBI felt itself completely unable to operate such a system.

The trade unions were divided, and the chances of the necessary majority approval at the annual Trades Union Congress in September 1965 seemed very uncertain. The Government therefore made known its intention to take powers to require compulsory notification of all proposed price increases and pay claims — but also made it clear that the powers would be used only if no effective voluntary system could be set up. In these circumstances the Trades Union Congress approved, by not too large a majority,[87] a proposal by its General Council: all affiliated unions were required to refer pay claims to the Council before proceeding with them.

The new voluntary system for notification was instituted in November 1965.[88] Since the CBI was not persuaded to operate the price notification system, all enterprises (public as well as private) proposing an increase in the prices of a specified list of goods and services are "asked" to inform the appropriate Government Department in advance, with reasons. The Department, without making a detailed examination, is required to judge whether there is a case for closer inquiry or for a reference to the NBPI. The enterprise is "expected" to postpone the price increase until the Department states its views or the NBPI reports. The specified list of goods and services applies primarily to manufacturers, and does not apply to exports. Its coverage is very far from comprehensive.[89]

On the side of pay, all claims, at national, local or enterprise level, and however few workers are affected, are to be submitted to the TUC, which has established a special committee to examine them. Unions are expected to refrain from further action until they hear the TUC's view (normally given within about five weeks). This system has been in operation since the end of 1965 and over 400 claims (by July 1966) have been examined. A small number of claims, mostly important ones, has been referred to special panels for further examination and discussion with the union concerned. The rest have received simply the TUC's approval for negotiations with employers to proceed, together with a reminder of the criteria of incomes policy.

In parallel with the TUC examination, a system was established for all pay claims also to be notified by *employers* to the Ministry of Labour,[90] which may also make further inquiries or refer them to the NBPI.

The pay and price standstill of August 1966

By the summer of 1966, it was clear that the measures introduced to check expansion had indeed slowed down the rise in output. But there was, at that point, no perceptible slowing down in employment, or increase in unemployment — partly because of a general shortening in hours of work. With continued heavy pressure on the labour market, there were no visible signs of a check to the rise in pay — either in conventional rates or in actual earnings.[91] Although the current balance of payments was improving, progress towards achievement of overall balance was slower than originally hoped. The sterling confidence crisis of July 1966, following the damaging seamen's strike, became the immediate occasion for reinforcing the deflationary measures.

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[84] For example, for railway workers (Report No. 8 of NBPI, Cmnd. 2873) and for Government industrial workers (Report No. 18 of NBPI, Cmnd. 3034). Before the Board was in operation, this more realistic comparison with actual earnings (adjusted for overtime) was adopted for London bus workers (in 1964) and for postmen (1965).

[85] British Railways, Government industrial workers, higher civil servants, Armed Forces, Midland Bank staff.

[86] From general statement of the Board's aims in its first report (Report No. 1 (Interim): Road haulage rates, Cmnd. 2695).

[87] The vote on the relevant resolution was 61 per cent in favour and 39 per cent against. The minority included the largest single union, the Transport and General Workers, which has consistently opposed any formal restraint on pay claims.

[88] Described in *Prices and Incomes Policy: an "Early Warning" System* (Cmnd. 2808).

[89] The goods and services listed cover about half of consumers' expenditure on food, but only a part of non-food expenditure, and a few items for industrial use. Together with goods and services provided by public enterprises, perhaps half of non-food consumers' expenditure is covered (primarily at the manufacturing stage). All food prices are in any case claimed to be under "constant watch" by the Ministry of Agriculture.

[90] In addition, unions not affiliated to the TUC (for example, some public service unions and some "white collar" unions) are requested to notify their claims to the Ministry of Labour.

At the same time, the Government decided to strengthen the machinery for incomes policy, and, in particular, to call for an emergency standstill on pay and price increases.

The new measures of July 1966 fall under three heads.[92] First, the voluntary "early warning" system described above was to be made more comprehensive in respect of price changes; the list of goods and services for which proposed price changes were to be reported was to be enlarged. For the time being, too, all manufacturing enterprises (but not, again, retailers) are requested to notify proposed price increases and not to put them into effect without Government approval. Particular cases may be referred to the National Board for Prices and Incomes.

Secondly, and far more important, the Government called for a complete voluntary standstill on price and pay increases, and on reductions in normal working hours, after 20 July 1966. Until the end of the year, effectively no increase in pay or prices should be made, and this should be followed by six months of "severe restraint" when increases should be made only for the most compelling reasons. The conditions under which exceptional increases would be regarded as permissible during the rest of 1966 were made extremely stringent. Price increases would be approved only if they arose from extra costs of imports or extra taxes which could not be absorbed. Pay increases should not be made unless they resulted directly from increases in output (for example, for workers paid by results, or for necessary increases in overtime) or from promotions (provided this is "genuine") or from existing incremental scales. Moreover — and this caused a considerable outcry — the six million workers who would have benefited after July 1966 from pay increases already arranged (including cost-of-living increases) were called upon to accept a six-months' postponement. Negotiations for increases could go on, but they should not take effect before 1967. In any new negotiations, the "norm" for pay increases must "for the time being" be regarded as zero. The putting into effect of decisions by arbitrators and wages councils should also be postponed. The same principles should be applied to pay increases outside collective agreements.[93] The Government further said that company dividends and distributions should also be regarded as subject to the standstill.[94]

These proposals were much more severe than any previously suggested by British Governments (earlier suggestions had at least exempted existing commitments). Heavy opposition was expressed by a number of important unions and both scepticism and hostility by the Confederation of British Industries. The support of the Trades Union Congress in September was obtained, but only by a small and unenthusiastic majority.

Thirdly, in an even stronger break from precedent, the Government for the first time took reserve powers to enforce by law particular levels of prices and pay — powers which, so far as pay in private industry is concerned, exist in western Europe only in the Netherlands. As said before, the Government had already intended to take powers to require compulsory notification of pay and price rises — the powers to be used only if the voluntary system failed. The Bill for the purpose was presented to Parliament in early July 1966. But the emergency induced the Government at the beginning of August to add new clauses to the Bill while it was still under consideration. These new clauses gave the Government power — for a period of 12 months only, until August 1967 — to make Orders prohibiting increases in any remuneration or in the prices or charges for any commodity or service. The onus is principally on employers, who can be fined if found to be paying disapproved wage increases as well as of charging disapproved price increases; but union officials (or others) can also be fined for attempting to induce employers to contravene an order. The Bill became law in August.[95]

Hopes that these compulsory powers could be kept in reserve were immediately destroyed by the action of certain more militant unions (the most prominent being a union of technicians and supervisors) who refused to accept voluntary postponement of pay increases already agreed. Their claim that the employers were legally committed to pay the agreed increases was supported by the court. To protect employers against further legal action, the Government was obliged to apply immediately, to two groups of workers, its powers to prohibit pay increases. Although no union leaders have expressed any enthusiasm for statutory control, the use of compulsory powers in these cases may not have been entirely unwelcome.

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[91] In the 12 months ending April 1966, hourly wage rates and earnings rose faster than in the previous twelve months, although consumer prices rose distinctly less. It is sometimes suggested that the slowing down of the price increase was due to the more effective influence of incomes policy on prices than on wages. In fact, however, the main reason seems to be that big tax increases on drink and tobacco were largely responsible for the big increase in retail prices during 1965.

[92] Announced in *Prices and Incomes Standstill*, Cmnd. 3073, July 1966.

[93] A second White Paper, issued in November 1966 (Cmnd. 3150), set out stringent criteria for the first half of 1967, during which the "norm" must still be zero. But genuine "productivity agreements" and some increases for the "lowest-paid workers" are now allowed; the rules for price increases are only slightly less rigid.

[94] By mid-November 1966, no pay increases had been authorized as exceptions; but some ambiguity about the date on which two "productivity agreements", which had been negotiated with great difficulty, entered into effect were resolved in their favour. In mid-October, it was announced that of 140 notifications of proposed price increases by manufacturers, 17 had been accepted, 5 withdrawn and the rest were under consideration (*Board of Trade Journal*, 28 October 1966).

[95] Prices and Incomes Act, 1966.

About the same time, the Act was also applied to prohibit certain price increases (by laundries and dry-cleaning) except with Board of Trade consent. Compulsory notification of pay and price increases, however, was not enforced. The result of the standstill was that for six months from July 1966 there was effectively no increase either in conventional rates or in earnings.

The next steps

In the circumstances of 1964-1965, with continuing heavy pressure of demand, the attempt to secure immediate voluntary restraint had some prospect of success, but the chance that it would be as effective as was hoped by its authors was never very great. If policy exercised a moderating influence, that influence cannot be observed statistically or in overall terms.[96] (It has been shown that the much longer-established machinery in the Netherlands, even with the support of the law, was similarly unable to withstand the heavy pressures on the labour market in 1964-1965.) What has happened, however, is that an increasing number of those concerned have come to recognize that existing methods of pay bargaining can be improved even if this recognition has not yet influenced the course of pay or prices.

For the immediate future, economic conditions are relatively favourable to moderation in pay and price increases, in the sense that the induced weakness of demand and rising unemployment will to some extent discourage price increases and pay claims, and will limit drift, quite apart from the standstill.[97] The more important question is whether the policy machinery can be strengthened to meet the pressures that will arise when demand is allowed to increase again.

Acceptance of the scrutiny of pay claims by the Trades Union Congress was itself a major innovation — whether it has influenced events so far or not. It seems likely that this machinery will continue, but it needs strengthening and, in particular, it will need to develop much more detailed and discriminating criteria than have so far been elaborated either by the Government or by the TUC itself. The TUC would no doubt wish to form its own criteria.

It has been proposed that some kind of tripartite "summit" body, representing the Government, management and the trade unions, might be established to provide guide-lines and possibly to scrutinize pay claims and price increases. That this should happen seems highly improbable in the present state of opinion. Nor is there much chance of establishing even a central body representing management and unions alone (corresponding to the Foundation of Labour in the Netherlands); but the possibility has been discussed of attempting to reach some agreement between the TUC and the Confederation of British Industry, after discussion with the Government, on the "norm" for average pay increases which the TUC, and presumably employers' associations, should apply. It is recognized that the norm so agreed might differ from that which the Government would wish to see enforced.[98] The Government recognizes that positive participation of unions and employers' organizations is essential, yet evidently takes the view, which both groups oppose, that it will be necessary to retain some compulsory powers in reserve when the existing law expires. What form such powers should take—whether they should permit the Government to prohibit, or only to postpone, awards—is under intensive discussion at the time of going to press (March 1967).

The issues so far mentioned relate to top-level policy. What is more important and fundamental, if any top-level policy is to be effective, is to rationalize the methods of determining pay at the workplace. It is well enough recognized that the leaders of the individual unions and employers' organizations, and *a fortiori* the leaders of the TUC and CBI, are not at present in a position to control the development of pay, partly because of the internal pressures to which union leaders are bound to be subject in times of heavy demand, and partly because of drift at the enterprise level.[99]

Fundamentally, of course, the problem for the unions is to regain control of the effective pay structure, which means control of pay determination at the plant level. The obstacle to this greater control is not so much (as it is in France, western Germany and Italy — as will be described below) resistance by employers to pay negotiation with unions at the plant level.[100] The obstacle is rather that many of the unions have not got the resources and organization to intervene effectively in the continuous process of wage determination in individual plants. The initiative at this level has passed from the local officers of the unions to shop stewards (especially, but not only, in the engineering industries). The shop stewards remain, in principle, recognized representatives of the union, bound — somewhat loosely — by union rules and procedures.[101] In effect, their activities tend to be directed fairly narrowly towards the interests of their constituents — which would be reasonable enough if these activities were effectively supervised by the unions.

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[96] In 1964 and 1965, as Chart 3.2 shows, hourly wage earnings rose about 9 per cent, which was about 2 per cent a year more than might have been expected from average relationships with unemployment and consumer prices. (Part of the excess rise must be attributed to the special factor of extensive reductions in normal working hours during the period.) In 1966, unemployment and increases in prices would have led, on average relationships, to a calculated rise in hourly earnings of about 7½ per cent; the actual rise was just over 6 per cent (October to October) but showed no slowing down before the standstill in July.

[97] As an arithmetical illustration: an average level of unemployment in 1967 of around 2 per cent (1.4 per cent in 1965), together with a rise in consumer prices of about 2 per cent (4.9 per cent during 1965), would result, according to the equation in Table 3.3, in a rise in hourly earnings of about 4½ per cent. This illustrative calculation allows nothing for the effects of the "standstill" on subsequent pay development.

[98] Report of press conference given by Mr. G. Woodcock, General Secretary of TUC, *The Times*, 31 October 1966.

[99] "I will tell you flatly to your faces, you will go through the motions as unions and you will boast yourselves as unions, and already many of your members are getting three times as much as you have negotiated for them. . . . The trade union movement is being transformed, if not eroded, because of your lack of control already." (George Woodcock, General Secretary of TUC, at Trades Union Congress 1965, *Report*, page 494.)

[100] "The more immediate problem which the collective bargaining system has to face is how to co-ordinate *industry-level* and *plant-level* bargaining. . . . Not all wage drift is undesirable. . . . However there are strong arguments against plant bargaining which is carried out in the light only of local circumstances and without regard to the terms of agreements made at industry level." (Evidence of the Confederation of British Industry to Royal Commission on Trade Unions and Employers' Associations, November 1965, extracts from paras. 108 and 111.)

Many ways of regaining control of the organization of pay settlements have been proposed, and some initiated. Increasing the financial resources of trade unions, appointing more, and better-paid, local officers, and arranging the training of shop stewards and their closer integration in the union appear to be one essential condition.[102] Another is the reform of a large part of the collective bargaining structure. Much of the problem arises from the tradition (found also in many other countries) of a single agreement for the whole metal-using, or engineering, group of industries — from shipbuilding to aircraft — a group which covers three million workers, in branches subject to widely differing economic conditions and technical changes and with which many different unions and many employers' associations are concerned. The principle of the "rate for the job" has some force, in that several occupations are common to these diverse branches of industry. But the effort to maintain a common rate of pay for such occupations has broken down at the plant level and is unlikely to be completely restored in present circumstances, even if that were desirable. Proposals for restructuring these bargaining arrangements are under consideration, in the hope of introducing greater reality in the formal bargaining process.[103]

Beneath these problems lies the confused and overlapping structure of unions, some based on occupations and some on industries; within certain limits, this might be expected to assist co-ordination of policy, since some of the great unions, particularly those covering general workers, operate in many industries. In practice, the effect seems rather to have been to accentuate "leap-frogging" in pay claims.

A special problem in determining criteria for pay settlements arises from the increasing use of "productivity agreements" (a question which is now under general examination by the National Board for Prices and Incomes).[103a] The advantages of exceptional increases in pay in return for agreements on improved working methods are obvious. The possible disadvantages are three: first, that the pay increases so secured will be used as a lever to push up pay elsewhere without the accompanying benefits in productivity; secondly, that such agreements may in effect mean putting an excessively high price on the abolition of restrictive practices; thirdly, that such agreements offer an escape-route from any generally agreed criteria for pay increases. Moreover — and this may or may not be regarded as a disadvantage — productivity agreements must tend to increase diversity in pay levels and so to break down the principle of the "standard rate". There is a clear need for the definition of tests which can be applied to particular cases.[104]

Extension of productivity bargaining, particularly on a firm by firm basis, is intended to play an important part in the future pay strategy of the Transport and General Workers' Union (the largest single union). The leaders of the union have expressed the strongest opposition to the Government's incomes policy,[105] on the grounds that pay restraint will never help to solve the real problem of British competitiveness. "Productivity is the key to economic progress", and productivity improvements can be secured by pressure for higher wages. One of the problems of the Transport Workers' Union is that it contains certain groups (such as dock workers, bus workers, and road haulage workers) whose resistance to associating pay increases with changes in working methods has been most intense.

Proposals for reform of the organization of pay settlement are easy to catalogue. They require, on the trade union side, first, a greater centralization of authority on pay questions in the TUC; second, the working out of an agreed set of principles for relative pay determination; third, a far more powerful organization at the local and plant level; fourth, a reorganization of important and long-established sections of the collective bargaining structure; fifth, a drastic reconstruction of the basic organization of the unions. On the employers' side, the necessary changes in organization may be somewhat less drastic — an employers' association, after all, does not attract the same emotional attachments, based on a history of social conflict, as a trade union — but the practical difficulties of controlling and diminishing drift are not dissimilar. Even if the leaders on both sides were convinced of the need for such reforms — which is not the fact — the programme is one that would take years to accomplish and is not one which a Government, of any political party, could do a great deal to promote directly. Meanwhile, the possibility of a certain amount of co-ordination at top-level is not to be ignored, even if that is bound to be confined to formal collective bargaining. As was shown in Chapter 3, there is every reason to believe that formal bargaining, while it does not determine with any precision changes in actual earnings, exercises a very substantial influence upon them.

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[101] Shop stewards are normally elected by the union members and are, for instance, generally responsible for collecting union dues. In fact, in several cases, shop steward committees have been formed from several branches of a large firm, or from several firms in the same area, or from several unions represented in the same firm, which have developed common wage policies independently of the union though sometimes accorded "semi-official" status. For literature on this subject see, for example, D. J. Robertson, "Factory Wage Structures and National Agreements", Cambridge 1960; Shirley Lerner, "Factory agreements and national bargaining in the British engineering industry", *International Labour Review*, January 1964; W. E. J. McCarthy, "The Role of Shop Stewards in British Industry" (Research paper for Royal Commission on Trade Unions and Employers' Associations (HMSO, 1966)).

[102] Another change now being considered in some unions is the possibility of establishing union branches in large factories. Union branches are normally based on place of residence, not on the workplace; this has, in the view of some authorities, contributed to the decline of interest in union activities and to the growth of "unofficial" pay settlement machinery to fill the gap. As regards the financial position of unions: the average annual contribution per member in 1963 was £3.11.0 ($10), including contributions to the various insurance and welfare schemes run by the union.

[103] The three-year agreement in engineering, made in December 1964, was intended to restrict plant bargaining, although it has not been particularly effective. As regards the splitting up of the engineering agreement, proposals are now being floated by union leaders for a separate national agreement for the motor-car industry.

[103a] A report was issued in December 1966 (Cmnd. 3167).

[104] For a review of these problems, see K. Jones and J. Golding, "Productivity Bargaining", Fabian Research Series 257, 1966.

[105] The union has consistently voted in the TUC against any expression of approval of the incomes policy and its General Secretary, Mr. Frank Cousins, resigned from his Ministerial post in 1966. It was also the first union to break away from the voluntary wage pause in 1948-1950.

No new and acceptable proposals have yet been formulated for improving the control of prices. The dilemma is this: the unions wish to see prices subjected to the same type of restraint as pay. But there is no unofficial machinery by which price changes can be scrutinized in the same way as collective bargaining for pay changes can be scrutinized by the TUC. The only way of achieving "symmetry" is that both pay and price changes should continue to be scrutinized by the Government — which the unions are reluctant to accept in respect of pay changes. Whether it will be possible, or effective, to preserve Government scrutiny of price changes, while the scrutiny of pay changes — or at least of collective bargains — is in the hands of the TUC, remains to be seen.

Meanwhile, it has not been suggested that the scrutiny of selected cases of pay and price changes by the National Board for Prices and Incomes should be discontinued, and this body may well increase in importance as an instrument for persuasion and publicity and, particularly, for contributing to the diffusion of more rational methods.

Progress in the directions now being discussed in the United Kingdom must be seen as a continuous process, towards which only a start has yet been made. The new approaches may, it is true, come to grief if it becomes obvious that those concerned are not prepared to make the necessary break with established practices. Success, if it comes, will be apparent only in the long run.

France

Fundamental discussion of the principles of incomes policy has for some years been more active in France than anywhere in western Europe. Moreover, France is almost the only country in which some basic principles have been officially laid down not only for short-term control of incomes, as a weapon against inflation, but also for the longer-term development of income distribution as an aim of economic and social policy; guidelines for such longer term development were incorporated in the Fifth Plan (1966-1970). But the vigorous and continuous efforts by the Government to reach consensus among the interested parties on the application of these principles have so far met with failure. The unions oppose Government intervention on the ground that it can mean only wage restraint; the employers because it will not only restrict freedom of collective bargaining but will also, and perhaps more important, obstruct the freedom to set pay at the plant level.

Some reasons for the difficulties encountered may be suggested. The strength, outlook and structure of the trade unions in France are very different from those in the countries so far discussed. The trade union movement is numerically weak; it is generally considered that only about a quarter of the wage-earners and a much smaller proportion of salary-earners are paid-up members.[106] At the same time, the movement is divided in political outlook: the largest group — the *Confédération générale du travail* — has been fairly closely linked to the Communist Party since the CGT split in 1947; while the other two major groups — the CFDT[107] and the *Force ouvrière* — are reformist in outlook. In addition to these groups representing wage- and salary-earners, there is the small but influential *Confédération générale des cadres.* In actual pay bargaining there is, of course, a measure of co-operation between these major groups, and between their constituent unions. But the division of the movement has so far prevented the elaboration of any common overall strategy (unlike the Netherlands, where the unions are also divided on confessional/political lines but normally co-operate in policy formation).

All the Federations have, however, made clear their unwillingness to participate in a voluntary system for the execution of an incomes policy. They expressed their positions with clarity at the *Conférence des revenus* called to discuss the whole question of incomes policies in 1963, and presided over by M. Massé, then *Commissaire du Plan.*[108] Thus the CGT took the view that the criteria for income policy officially proposed would be useful, but only "s'il s'agissait d'une société différente de la nôtre". The other trade union groups, particularly the CFDT,[109] expressed their doubts in somewhat less uncompromising terms, but still left little hope that co-operation would be forthcoming. Generally, the unions' attitude seems to have been to oppose any form of Government intervention in pay determination, which, in the words of one union official, would be "inefficace, injuste et contraignante". Meanwhile they urged that both economic growth and price stability depended primarily on the effective carrying out of a number of structural reforms, including the improvement of the distribution system, the modernization of the fiscal system and prevention of tax evasion, and the expansion of training. At the same time, it was represented that proper decisions on incomes policy could not be made because of the lack of adequate statistical information, notably about profits and other non-wage incomes.[110] The employers' associations also resisted any approach to detailed intervention on pay questions, although ready to support general guide-lines.[111] Of the parties represented at the *Conférence des revenus*, only the farmers' associations, feeling the lag in farm incomes, felt the desirability for some kind of guidance about income development. The Government's proposal to establish a *Collège des revenus* to review income changes was resisted, but was revived in modified form in 1966 when an independent "centre for the study of incomes and costs" was established.

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[106] Estimates of trade union strength vary substantially between 2½ and over 4 millions. A tendency to exaggerate arises because the number of representatives on certain official bodies, including the collective bargaining commissions, is based on the number of members claimed. There are also difficulties in defining a "trade union".

[107] *Confédération française démocratique du travail,* formerly CFTC (Christian).

[108] "Rapport sur la politique des revenus", *Documentation française*, 1964; Recueils et monographies, No. 47.

[109] The CFDT (then CFTC), which has taken an active part in the economic planning machinery, pressed particularly for an incomes policy based on greater participation of unions in pay determination at the plant level; it urged "une véritable procédure contractuelle" as much preferable to "une procédure concertée".

[110] One result of the Conference was to promote a programme for the improvement of official statistics.

The practical difficulties of applying any incomes policy in France are intensified by the diversity of methods of pay settlement. After the war, a hierarchical structure for collective conventions was established by law, providing for industrial, regional and enterprise conventions.[112] Convention agreements were to be reached by commissions of employers and of "the most representative" trade unions concerned, summoned by the Ministry of Labour at the request of one of the organizations. The law envisaged a chronological order of conventions, beginning with a national convention of which the provisions would be applied at the regional and enterprise levels. Conventions could be given statutory force as minimum pay rates. A separate procedure was laid down for the public sector. A classification of occupations (the Parodi classification) was set up for general use providing standard scales of differentials for different industries. A minimum wage (the *Salaire minimum interprofessionnel garanti*, or SMIG) was established by law for industry, with a similar minimum (the SMAG) for agriculture. These minima correspond to the "vital" level of subsistence and are adjusted from time to time with changes in the cost of living — and, less often, with the growth of the economy.

The minimum wage (SMIG) is no longer a major factor in pay, but still affects, directly or indirectly, the pay of about 20 per cent of workers. The decision to raise the SMIG in March 1965, although not justified by a previous rise in the cost-of-living index, was regarded by the Government as an element in incomes policy.[113]

The legal framework of the collective bargaining system still exists. But for many years it has been little more than a framework.[114] In most private industry, the conventional rates — which are based on national conventions in some industries (for example, chemicals), but regional conventions in others (for example, metals and metal-using) — have become minima supplemented by various premium systems and special rates determined at the enterprise level. In some branches, the revisions of collective conventions — partly because of the delays in procedure — have tended simply to formalize increases which have already spread from plant to plant. This is particularly true of the metals and metal-using industries, where the tendency has been simply to fix the conventional rates by reference to effective earnings in the lowest-paying group (for example, the lower decile) of the enterprises concerned. Thus the level of actual earnings in much of private industry is far above the conventional scales, and also varies greatly between different parts of the country and from plant to plant.

Generally, it seems that the initiative in fixing the actual pay scales in individual enterprises rests with the management. It is true that the unions have succeeded in concluding a number of collective conventions with individual enterprises. These enterprise agreements, of which the Renault agreement of 1955 is the most celebrated, were quite numerous in the mid-1950s. But for the most part employers have successfully resisted the intervention of the unions into pay determination at the enterprise level.

In these circumstances, the extent to which the application of collective bargaining should be extended to enterprise bargaining has become an important source of conflict. The unions, aware of the unreality of much of their bargaining activity at the branch level, and of the "anarchy" of the actual pay structure, press for the right to negotiate directly with enterprise managements — to "institutionalize" the dialogue between the management and the personnel of the enterprise.[115] This is seen as the only way to give a contractual basis to actual pay levels, under which the various bonuses, premia and special arrangements made at enterprise level would be integrated into a collective convention. "It is abnormal and contrary to all justice that the variable and non-guaranteed proportion of the effective wage should represent, in some cases, 50 per cent, and sometimes more, of the total wage."[116] Managements, the unions complain, have not acquired the habit of "contractual "pay arrangements. The unions stress two results of present methods. First, the effective wage, not being supported by collective contract, varies greatly over time according to economic circumstances. Second, there is great diversity from one plant to another.[117] There is probably rather more stress on the demand for a guaranteed actual wage, that is for greater uniformity of pay over time, than for eliminating inter-enterprise differences.[118]

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[111] The major employers' organization is the *Conseil national du patronat français*, but its powers are limited. Unlike most of the other organizations, it did not submit a general statement of its attitude to the *Conférence des revenus*.

[112] Until 1950, when free collective bargaining was restored, revision of collective agreements required Government approval.

[113] In 1963, only about 4 per cent of workers in industry and commerce were paid the minimum. But it is estimated that about 17 per cent (in 1962) were on pay rates near enough to the minimum to benefit rapidly from a rise in SMIG. (M. Parodi, Paper on France in OECD, "Low Income Groups; Papers for a Trade Union Seminar", Supplement 1966.)

[114] The Parodi system of occupational differentials is, however, still very widely observed in the conventional agreements.

[115] For an academic discussion, see *Droit Social*, March 1965, reporting a conference on "Problèmes actuels du syndicalisme". For a union view, see "Pour une politique des salaires", Report presented to 1961 Congress of CFTC by René Bonéty (second edition), February 1964.

[116] "Pour une politique des salaires", p. 62.

[117] An inquiry conducted by the *Fédération générale de la métallurgie* (CFDT), in the metals and metal-using industries in February 1965, covering 300,000 workers, showed a difference of 35-40 per cent between the lowest and highest average earnings, by enterprise, for each of the seven occupational groups, even ignoring the 10 per cent of enterprises with the highest and lowest average pay. "Resultats de l'enquête nationale salaires", Supplement to *Bulletin du militant*, No. 217, September 1965, *Fédération générale de la métallurgie*.

[118] An inquiry among nearly 400 active trade union members in chemicals and metallurgy showed that the vast majority would

Many employers are prepared to recognize that the existing branch conventions and negotiations are made on too aggregative a level and would accept a finer breakdown among branches in order to come closer to reality in wage bargaining. But they are in general opposed to the rigidity and loss of management initiative and to the contractual commitments, which, they feel, would result from a wide extension of negotiations with the unions at the enterprise level. They fear, too, that unions would use enterprise bargaining to bid up pay rates by attacking first the more successful firms and then forcing similar increases throughout the branch — a strategy that has been adopted in other countries (for example, the United States and Italy) where the unions have successfully adopted plant bargaining.

This summary of attitudes is intended to convey what appear to be majority views among unions and employers. They are not necessarily unanimous. Among the unions, there are some who would consider a general move towards collective bargaining at the enterprise level a retrograde step. And there are some employers who are prepared to accept it.

It should be noted that, under a law of 1944, enterprise committees were to be established in every enterprise with more than 50 workers. This was considered at the time an important victory for the workers, inspired by the social aims of the liberation. Actual experience has been disappointing. The Committees have in fact been mostly limited to social affairs in the enterprise, and out of 24,000 enterprises covered, only about 9,000 such committees were formed of which perhaps only a third are really active. The committees are elected by all the workers in the enterprise; they are thus independent of the trade union hierarchy. But it is common for the unions to present lists of candidates and the elections in major enterprises, in which large proportions of the workers vote, are regarded as trials of strength between the different union groups. A recent law adds delegates of the most representative unions to the Committee, in an effort to give "recognition of the existence of the union in the enterprise": the law was criticized both by the Patronat and by the left, and is not expected to increase significantly the importance of the committees.

Short-term stabilization policy, 1963-1966

In these conditions, the attempt to use incomes policy as a short-term instrument of stabilization policy, to meet the inflationary pressures which came to a head in 1963, could have only limited effects. In fact, the measures taken under the heading of incomes policy — as supports to a more fundamental policy of deflation of demand — were two. First, a strong effort was made to hold back pay increases in the public sector — an effort carried through against the strong resistance of the unions concerned, which has been expressed in a series of short strikes. In 1964 a special committee under M. Toutée[119] had recommended — as a method both of controlling pay increases and of restoring the financial position of nationalized industries — a procedure described as the Toutée procedure. Under this, the Government determines a total sum by which the wage and salary bill of each of the industries concerned can be increased, leaving the allocation to be decided by collective negotiation. Thus the increases for both 1965 and 1966 were mostly just under 5 per cent[120] (average wage-earnings in all industry rose just over 5½ per cent during 1965). Union objections were raised for two reasons: the refusal to allow any form of negotiation about the total amount and the fact that pay in the public services, already regarded as low in relation to private industry, would fall further behind. The Government also restricted increases in the pay of public employees (to 4 per cent during 1965).

Secondly, the Government made extensive use of its powers of controlling prices, both for the direct effect and because it was expected in this way to restrain employers from bidding up pay at the plant level. Under wartime and immediate postwar legislation, the Government has retained fairly comprehensive powers to set maximum prices by order.[121] In the last fifteen years, these powers have been used only for short periods (as in 1952, 1954, 1956, 1957), to meet phases of general inflationary pressure or to restrain excessive price increases in particular sectors; after the "freeze" of 1957, most prices were again freed, but control was reintroduced as part of the stabilization programme of 1963. Thus since 1963, producer prices of all industrial products, and retail margins on certain products, have been frozen, in the sense that no increases can be made, without special authorization, above the levels of August 1963. Authorization to increase prices is given when external costs can be shown to have risen, but not for what are regarded as unjustified pay increases. The system is administered by price inspectors, and sanctions include imprisonment, and the closing of an offending enterprise, as well as fines.

The emergency price controls of 1963 have in general been kept in force, although the "emergency" can be said to have passed. But a new régime of partial liberalization has been introduced in 1966. This is the system of "programme contracts", representing a new and experimental way by which the Government may be able to influence not only prices but other private enterprise activities, to secure conformity with general economic policy without rigidity of control. The Government offers to firms, or to whole branches of industry, a formal

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themselves press for a *guaranteed* wage in preference to an immediate increase, and a small majority considered that workers generally would make the same choice. On the other hand, only a modest majority preferred a rise in the collective convention minima to a rise in actual pay at the enterprise level, and held that the great majority of workers would prefer the rise in actual pay. ("Les syndicats ouvriers et leurs politiques des salaires", *Revue française du travail,* April-June 1966.)

[119] "Mission sur l'amélioration des procédures de discussion des salaires dans le secteur public", Rapport de M. Toutée, *La documentation française,* 1964.

[120] The organizations concerned include the SNCF, the coal mines, Electricité de France, Gaz de France, and Paris public transport. The increase, in each year, varied between 4.6 and 5.0 per cent.

[121] For details, see OECD, "Policies for Prices, Profits and Other Non-Wage Incomes", 1964.

"programme contract", under which the firm or branch undertakes to keep the development of its prices and wages, as well as its investment programme, exports, etc., in conformity with the targets of the Fifth Plan (which, it may be noted, provides among other things for a *fall* in prices of industrial products). The firm, or branch, undertakes also to discuss its development and prospects regularly with the Government. In return, the signatory is freed from the statutory control of prices (and may also hope to receive favourable treatment in such matters as the allocation of external finance). Such contracts have so far been signed with manufacturers of certain household appliances (March 1966) and, more important, with the motor-car industry (July 1966).

Medium-term incomes policy

Undeterred by the difficulties of obtaining voluntary co-operation in a general incomes policy, the Government incorporated in the Fifth Plan a series of "guidelines" for the development of relative pay and prices over the period 1966-1970. The trade unions' hostility to incomes policy as well as to many other aspects of the Fifth Plan was repeated in 1964 when the CGT and CFDT refused to support the report of the Economic and Social Council on the Plan (a report which was still very critical in some respects).[122]

So far, these objectives have been stated only in very general terms. Indeed it does not seem to be intended to announce more than certain macro-economic indicators, leaving their application in detail to be determined by the market. Thus the central objectives of the *planification en valeurs*, so far as it treats income shares, are:

(*a*) Some increase in the *self-financing* ratio of enterprises; it is felt that the recent decline in self-financing, added to the difficulties of obtaining sufficient external finance, has impeded the development of productive investment.[123] This emphasis on greater self-financing seems to imply a rising share of profits, in relation to wages, in national income — although there are other ways in which it might come about (for example, through changes in taxation). However, the plan provides for a rise in average real income of wage- and salary-earners, from 1965 to 1970, of 3.3 per cent a year,[124] and of slightly under 5 per cent in the total real wage and salary bill, against a rise in total real output of 5 per cent.

(*b*) Some catching-up in *agricultural standards of living*. The intention is (in accordance with a law of 1960) that farmers should enjoy income parity with other groups, in the sense that agriculture should yield an income substantially equal to that obtained in other sectors per unit of capital and labour. It is recognized that this involves radical reform of the whole structure of French farming.[125] Thus the total real income of farmers is planned to rise by 3.6 per cent a year, but their number to fall by 1.7 per cent, giving a rise in real income per farm unit of over 5 per cent (against 2½ per cent in 1960-1965). The aim of income parity for farmers is one that the Government can take steps to bring about, through its agricultural price policy. The difficulties are to reconcile high agricultural prices first with structural reform in agriculture and the desired contraction in the number of farmers; second, with keeping down the cost of living and thus preventing the spiralling of industrial wages.

Whether it will be possible for the Government to hold to this nucleus of medium-term incomes policy, in the face of the industrial and political pressures from the interests concerned, remains to be seen. "All the signs point to incomes policy being the storm centre of conflict rather than the centrepiece of consensus."[126] Meanwhile, the Fifth Plan Working Party report, "Réflexions pour 1985", has declared that "in 1985, the need for income discipline will have been recognized by the various social groups, and the incomes policy defined by public authority will have become the instrument of a new social contract".[127]

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[122] J. E. S. Hayward, "Interest Groups and Incomes Policy in France", *British Journal of Industrial Relations*, July 1966. In another debate on incomes policy in 1964, both management and labour representatives in the Social and Economic Council inflicted "a decisive defeat . . . upon the very principle of a national incomes policy in the prevailing political context" *(ibid.)*.

[123] For a fuller discussion, see the SURVEY for 1965, Part 1, Chapter II, p. 84.

[124] It was 5 per cent a year in 1960-1965. The planned rise for 1966-1970 for a worker not changing his occupation is put at 2.9 per cent, thus allowing room for promotions and mobility of labour into higher-paid jobs.

[125] Active measures are in fact being taken to promote amalgamation of farm units.

[126] J. E. S. Hayward, *op. cit.*, p. 200.

[127] "Réflexions pour 1985", *La documentation française*, 1964, p. 60.

4.3. OTHER COUNTRIES

In the following pages, we discuss recent developments in the remaining five countries of western Europe: Ireland — where, within the last three or four years, efforts have been made to promote acceptance of an incomes policy; and Belgium, Italy, western Germany and Switzerland, where there is less evidence of the exercise of official influence or of co-ordination of collective bargaining (although price control has some significance in Belgium). For each country, we try to relate the opportunities, and need, for incomes policies to the institutional background and to the actual course of pay, cost and price pressures.

Belgium

Collective bargaining in Belgium is relatively well organized, mainly on a branch basis but often with separate agreements by area. A large proportion of bargaining takes place in the *commissions paritaires* established in 1945 (joint labour-management committees with a chairman appointed by the Ministry of Labour; his function is, however, to remain neutral, not to seek to impose a particular Government policy). Agreements, generally terminable after a year, though a few are for longer periods, can be made legally binding on all firms concerned on the request of a *commission paritaire.* The trade union movement is divided between two major federations with different political links; the majority of the individual unions are industrial. There is a single federation of employers.[128]

During most of the 1950s, when the rate of economic growth was relatively low and unemployment rather high, wage pressures were not severe. The rate of increase in wage earnings (as in productivity) was below the average for western Europe (Table 3.1). Although there are no statistics of changes in conventional rates before 1958, it is not believed that wage drift was significant. In the 1960s, the growth rate of the Belgian economy was speeded up; unemployment fell. The rate of increase in industrial earnings accelerated from 5½ to 6½ per cent a year, but was matched by the greater rise in industrial productivity. The increase in unit labour costs over the whole period 1958-1965 was thus negligible (Table 3.2). Wage pressures became more serious, however, in 1961-1965 and the increases in conventional rates — largely the result of the very extensive use of cost-of-living indexation — were accentuated by the appearance of substantial drift.[129]

Rising costs and prices led to a policy of restraints on demand which slowed down the expansion of output, but not of costs or prices, in 1964-1966. During 1964, there was some discussion of the possibilities of introducing, by agreement, some kind of incomes policy; both management and unions were reluctant to be committed and the political situation put a stop to further progress (the socialists retired from the coalition, after losses in the election of May 1965). There was, however, an agreement in July 1966 on "social programming", under which the union federations agreed to refrain from claiming further reductions in working hours for the next two years, in return for a managerial concession on holiday pay.

Belgium is exceptional in that the Government has retained price controls without seeking to influence wages. Comprehensive powers were taken in 1945 and renewed, on a more restricted basis, in 1959. The procedure (somewhat resembling that in the Netherlands) is that manufacturers and importers are obliged to notify the appropriate Government Department of all proposed price increases in a specified list of goods and services. If the Minister does not react within three weeks, the increase can be made. If the Minister doubts the justification for a price increase he must refer it for investigation to an advisory Price Commission representing management, trade unions and other interests, and the price rise must be postponed until the Commission reports.

After the immediate postwar period, these powers were hardly used for several years. But when price increases became more serious, after 1960, the Government and the Commission became much more active. The Minister is entitled to fix a compulsory maximum price for a given commodity. More often, however, he proceeds (as in the Netherlands) by persuading the producer or importer to withdraw or modify the projected price rise. The delay involved by a reference to the Price Commission is, also, regarded as itself a way of moderating price rises.

Continued price increases in 1966 (with retail prices rising by about 5 per cent a year) led the Government to institute a general three-month "price-stop" in May, designed particularly to reduce the impact of price rises, through indexation, on wage rates. The Government announced that during this period all applications for price rises on a specified list of goods and services would be rejected; and the Government proposed to "negotiate" price reductions. The complete price-stop was lifted in July 1966, but the Government hopes still to be able to impose restraint through the system of price notification which has been extended to all goods and services. The effect of so short a price-stop can hardly be assessed. The price indices suggest a certain stability during the summer of 1966 after fairly continuous increases. But the stagnation of demand and output since the beginning of the year may be equally responsible.

A feature of the Belgian economy is the network of joint advisory committees, representing officials, unions, and management, in each branch of industry. These are the "conseils professionels" which discuss the economic position in the branch. At the national level, the central council establishes from time to time general conventions, operating for a few years, and determining general conditions of work — maximum hours, holiday provisions, etc. — throughout industry. The *Comité national d'expansion* and the *Conseil central de l'économie*, especially the first which is concerned with the major issues of economic policy, are consultative bodies in which management and unions, including representatives of agriculture and small businesses, are able to advise the Government. In these ways, unions and management are committed to participation in the formation of economic and social policy.

Western Germany

No serious effort has been made to establish machinery in western Germany for the bringing into operation of an incomes policy. Official pronouncements have often enough during the last five years called for voluntary restraint in pay bargaining, and more recently the independent, though officially appointed, Council of Experts has proposed an annual "norm" for wage increases. But neither unions nor management organizations have shown willingness to accept any greater measure of Government influence over pay bargaining.[130] Attitudes may not be very different from those in Britain and France — but in western Germany there has been no attempt by the Government to overcome the natural opposition to a loss of complete independence.

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[128] The union federations are the *Algemeen Christelijk Vakverbond*, linked with the Christian Social Party (the largest group); and the *Confédération générale du travail belge*, linked with the Socialist party. About 60 per cent of wage- and salary-earners are union members. There is also a small Liberal group. The employers' federation is the *Fédération des industries belges.*

[129] In 1961-1965, conventional hourly rates in industry rose by nearly 8 per cent annually, and hourly earnings by over 9 per cent. Output per man-hour in industry was rising by about 5 per cent. Since 1963, automatic indexation must have been responsible for approximately half the increase in conventional rates.

It is often suggested that, at least in the 1950s, the respect paid by the unions to overriding national economic interests, and the fear of inflation, accompanied by fairly easy conditions in the labour market, fulfilled the functions of an effective incomes policy. In fact (see Tables 3.1 and 3.2) the rise in wage-earnings, even in 1952-1958, was 2 per cent a year in excess of the increase in output per worker in industry, half of the rise being due to the increase in conventional rates and half to wage drift. This rise in unit labour costs was only a little below the western European average. Yet in that period, unemployment, although falling fairly steadily, was on average nearly 1 million. In 1958-1965, when unemployment was on average only just over 250,000, the accelerated rise in conventional rates and in drift brought the rise in unit labour costs up to 3 per cent a year — above the western European average. The stability of industrial prices and export prices during both periods argues a marked fall in profit margins, offsetting most of the pressure from labour costs within industry.[131] The greater rise in consumer prices was heavily influenced by rising costs in food production, rents, distribution and services.[132] Thus it may be the price behaviour of industry (influenced perhaps by high profit margins previously), rather than the mildness of union pressures, which explains the moderation of price increases. The bargaining pressure of the unions has, however, been exercised with a sensitive eye to the cyclical situation. The biggest increases both in conventional rates and in earnings took place in, or just after, the periods of particularly high demand (1955-1957, 1959-1960, 1964-1965).

Collective bargaining was restored after the war with a new organizational structure. The trade union movement was reconstructed on the basis of 16 industrial unions, sub-divided regionally, in place of the mixed occupational and industrial structure, further divided by political interests, of the Weimar Republic. The central federation, the *Deutscher Gewerkschaftsbund* (DGB),[133] began with substantial authority, which has, however, somewhat diminished. The initiative in pay bargaining rests wholly with the individual unions (much as in Britain) and it cannot be said that the union movement as a whole follows a specific wage policy. Frequently, however, leadership has come from the largest single union, the metal workers' union, which embraces nearly 2 million workers in the metal-producing and metal-working industries, out of the total of 6½ millions in DGB unions. As in some other countries a single agreement for a wide variety of heterogeneous branches of industry thus covers a very large proportion of total wages. The employers are organized in industrial association federated to the *Bundesvereinigung der Deutschen Arbeitgeberverbände* (BDA).

Collective bargaining normally covers a whole branch, in accordance with the union structure, but there are frequently separate agreements for each region. Often, for example in metal-working, bargaining has begun on a regional level and on the initiative of the regional organization, rather than the national headquarters, of the metal-workers' union. Agreements are mostly for a minimum period of one year, and expiry dates are spread over the year. Thus there has been some tendency for a more or less annual "wage round" to develop, in which each branch settlement is influenced by those preceding it — generally beginning with the metal-workers.

As elsewhere, the pay structure has been affected by pay levels in individual plants in excess of the minima provided by the branch negotiations. In 1962, actual hourly earnings over the whole economy were 14 per cent over the tariff wage for men and 10½ per cent for women; the excess was much greater in most manufacturing industries.[134]

To a limited extent, plant agreements are the result of union bargaining. Thus the metal-workers' union has separate plant agreements with Volkswagen, with some large steel companies and with several hundred other firms (but mostly small employers outside the employers' association).[135] But for the most part the plant pay structures are the result of employer decisions or of informal bargaining with the works council (the *Betriebsrat*, which is not part of the union machinery, and which is not entitled to negotiate wage contracts unless authorized under the relevant national contract).

The west German trade unions, like those in many other countries, are seeking ways of regaining control of the effective pay structure at plant level. Their aims are: first, to decentralize the bargaining process so as "to be able to take immediate advantage of particular openings in branches, regions, and above all individual firms" *(Betriebsnähe Tarifpolitik)*; secondly, to press for a more uniform and rational system of job classification and rate-fixing to be applied throughout a given branch, in order to break down the "variegated mixture of wage-fixing systems, which no longer bear any relation to the collective agreement"[136] — thus absorbing the various bonuses and premia and special rates into a more realistic collective contract *(Tarifwahrheit)*. The need for significant inter-plant and local differences in pay levels (at least, temporarily) thus seems to be accepted by the unions (perhaps with a view to spreading the higher rates subsequently to less favoured areas); but the unions are trying to get the process of differentiation subjected to formal collective bargaining under wage contracts.[137] Since there are rarely union branches in the plants, efforts are being made to influence the choice of members of the works councils and to establish a system of shop stewards to secure liaison between the unions and the Works Council.

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[130] The unions' attitude is summarized by the senior economist to the *Deutscher Gewerkschaftsbund:* the unions "have learnt from past experience that they have been successful only when they have been able to use their power without hindrance from the state. They have failed when their demands could be realized only with State backing" (H. Markmann, "Incomes Policy in Germany", *British Journal of Industrial Relations,* November 1965).

[131] In 1952-1958, both producer prices of industrial goods and export prices were almost stable, against a 2 per cent rise in unit labour costs in industry. In 1958-1965, producer prices of industrial goods and export prices for manufactures rose about 1 per cent a year (unit labour costs rising 3 per cent). Consumer prices rose about 1 per cent a year in 1952-1958, and over 2 per cent a year in 1958-1965.

[132] See Chapter 2, p. 5, for analysis of the rise in consumer prices.

[133] There are separate organizations for clerical workers and officials. For the organizational structure and wage developments to 1960, see OEEC, "The Problem of Rising Prices", 1961: Appendix on "Wage Determination in Germany". For developments in policy, see especially H. Markmann, *op. cit;* A. M. Ross, "Prosperity and Labour Relations in Europe: the case of W. Germany", *Quarterly Journal of Economics,* August 1962; M. Edelman and R. W. Fleming, "The Politics of Wage-Price Decisions", 1965.

[134] See Chapter 3, pp. 24 and 26 for more detailed analysis of wage drift in western Germany.

[135] A. M. Ross, *op. cit.,* p. 348. Formal national and regional agreements can, however, be made binding as legal minima on all employers concerned, whether members of the negotiating association or not, and commonly are.

On their side, managements have resisted these pressures, preferring that collective bargaining with the unions should normally be limited to the establishment of minimum rates over wide areas, leaving room for extra payments at the discretion of individual employers. To embody higher rates in formal contracts would restrict the possibilities of adjustments when business is slack.

Efforts by the Government to influence the course of pay bargaining have so far met with little response. The first formal effort was a recommendation in 1960 by Dr. Blessing, Chairman of the *Bundesbank*, who was asked by Dr. Adenauer to suggest the "room" for pay increases in 1960. The Blessing Memorandum of early 1960 proposed the linking of pay increase to productivity, forecasting the increase in productivity in 1960 at 3 to 4 per cent. The Government reinforced this proposal. In fact, in 1960, overall productivity increased by 7½ per cent and average earnings in the whole economy by 9 per cent.

As pressures on wages, and to some extent on prices, continued, the Government continued to appeal for restraint: "The Federal Government appeals to entrepreneurs to take account of overall economic considerations in their price policy; and to the social partners to support the Government's stabilization effort in their wage and working time policy .... The limitation of wage increases to expected production increases ... must continue to be a guideline."[138]

The next development was the establishment in 1963 of a Council of Experts, with the function of evaluating economic developments in general and of examining ways in which stability of the price level can be achieved with high employment, growth and equilibrium in the foreign balance. The Council is not able to make specific policy recommendations and its membership consists of academic experts; it is not intended to "represent" either the Government or the social partners. In its first report,[139] the Council adopted a rather broad attitude. While emphasizing the need for wage and price restraint, the Council did not regard a rigid link between pay and productivity as either a necessary or a sufficient condition for monetary stability. It urged the need for more saving by wage- and salary-earners — as the way towards a long-term shift in wealth distribution; for a long-term price policy on the part of enterprises directed towards fast growth rather than high profit margins; and it stressed the need for government economic policy as a whole to be more flexibly adapted to conjunctural changes.

In its second report, the Council was more specific on the room for wage increases in 1966. Assuming a 4 per cent rise in overall hourly productivity in 1966, and allowing 2 per cent for unavoidable increases in consumer prices, the Council suggested that the rise in average hourly earnings should not exceed 5.9 per cent in branches "which do not experience or expect an above-average shortage of labour".[140] This formulation, which provides for the lagged effect of price pressures already in the system, represents a certain advance towards realism in relation to "norms" laid down in some other countries. In fact, there has been in 1966 a certain easing of pressure and the increase in money earnings may not much exceed the 6 per cent norm.[141]

As regards "non-wage incomes" and prices, no proposals have been seriously considered for the re-establishment of controls. Rent controls have been abolished by degrees and are no longer significant. It does not appear that the unions — although strongly resisting Government intervention in pay determination, partly on the grounds that effective methods of restraint on other incomes are not proposed — would press for any specific form of control over prices and profits. As elsewhere, the lack of adequate statistical information about profits is one obstacle to agreement on a broadly-conceived incomes policy.

Although establishment of formal machinery seems improbable, efforts are now directed towards agreement on "concerted action". (While this study was in the press (March 1967), Dr. Schiller, Minister of Economics, announced an agreement between Government, management and labour representatives on general economic objectives for 1967, including agreement that a rise of about 3 per cent in average hourly wages would be adequate.)

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[136] Quoted passages from H. Markmann, *op. cit.*, p. 333.

[137] Efforts have also been made by some unions to get increases under national or regional agreements applied to actual earnings in the individual plants and not simply to the conventional rates. This has generally been resisted by managements, and, among major branches, applies only in the textiles agreement.

[138] June 1963 addition to the *Second Economic Report of the Government.*

[139] *Jahresgutachten des Sachverständigenrats zur Begutachtung des gesamtwirtschaftlichen Entwicklung*, Bonn, 5 January 1965.

[140] *Zweite Jahresgutachten* . . ., 15 December 1965, p. 113. In arriving at this precise figure, the Council also allowed for structural changes in employment (adding 0.2 per cent a year to average earnings) and for better terms of trade (0.1 per cent).

[141] Average hourly wage-earnings in the year 1966 were 6½ to 7 per cent up on a year before, and the rate of increase seems to have slowed down during 1966.

Ireland

Pay increases in Ireland were moderate in the 1950s but so was the rate of growth of output and productivity. The rise in industrial unit labour costs was near the average for western Europe (Tables 3.1 and 3.2). From about 1960, a new impetus was given to the growth rates and pay increases also accelerated, although no more than in many other countries; unit labour costs and prices rose substantially and from 1963 the balance of payments fell into large deficit. The level of non-agricultural employment, which had been fairly stable throughout the 1950s, began to increase fast in the 1960s. The extra demand for labour seems to have been met, however, by reduced emigration rather than by falling unemployment. The unemployment rate, although a little less than in the 1950s, was still around 5-6 per cent (of insured workers) throughout the 1960s. The pressures on the labour market are complicated by the links with the labour market, and economic conditions generally, in the United Kingdom.[142]

In part, the quite large increases in wages and salaries in Ireland may be influenced by the view that the recent modernization and expansion of Irish industry justify a closer approach to corresponding pay levels in the United Kingdom (compare the "catching up" process in the Netherlands, in relation to western Germany and France). The gap, although showing some tendency to narrow, is still very wide.[143]

Although the Irish trade union movement has its links with the United Kingdom — indeed some British unions cover both countries — there are important differences in collective bargaining. In particular, wage bargaining in Ireland has developed since the war a strong two- or three-year cycle of "wage rounds". The course of wage rates has for this reason been particularly jerky (manufacturing wage rates rising by 8 per cent in 1953 and 1956, 6 per cent in 1960, 15 per cent in 1962 and 13 per cent in 1964, with increases of only 1 or 2 per cent, or even zero, in the intervening years). The two- or three-year agreements in Ireland have taken the form of large immediate increases followed by a year or two with no increases (the more usual current practice elsewhere, for long-term agreements, is to arrange for more equal increases at regular intervals). This uneven movement of wage rates has been to some extent smoothed out by wage increases outside the formal agreements; thus wage drift has not been great over an average of years (about 1 per cent a year in both 1952-1958 and 1958-1965); but in years between wage rounds, drift was very large while in some wage-round years it was negative.[144] Even then, the increases in earnings in wage-round years have recently been far above average. Thus in 1962 average hourly earnings rose 12 per cent (but followed by 3 per cent in 1963) and in 1964 by 13 per cent (but followed by 4 per cent in 1965). These sudden increases have been associated with difficult negotiations and with strikes, notably in branches where it was felt that pay rates were lagging behind. They are also believed to have a greater effect on prices than would a more even progression.[145]

Discussions about the possibilities of voluntary control of pay increases were initiated by the Government in 1962 and the big increases negotiated in that year were followed by an official appeal for a wages pause. For the next wage round, in January 1964, there was for the first time a form of central co-ordination intended to represent a first step towards an incomes policy. The leaders of the Irish Congress of Trade Unions and of the Federated Union of Employers, meeting in the Employer-Labour Conference, recommended that new collective agreements should be based on a general 12 per cent rise in weekly wage and salary rates (with £1 a week rise as a minimum for men) and should run for 2½ years — until mid-1966.[146]

Negotiations for the next agreement began late in 1965; a delegate conference of the Irish Congress of Trade Unions put forward a central recommendation that claims should be limited to an increase of £1 a week. This would represent an average rise of 7½ per cent for wage- and salary-earners together. The Government held that in view of the weak balance-of-payments position, and the expected rise in output of only 3 per cent, pay increases should be limited to 3 per cent.[147] The attempt to secure a new central agreement broke down, and independent industry bargaining has been restored. The Labour Court has, however, put out "guide-lines" "following in general terms the view expressed by the Special Congress of the ICTU".[148]

The first steps towards the application of an incomes policy in Ireland have concentrated on immediate increases in average wages and salaries. In a forceful report in 1965, the National Industrial Economic Council — a body including representatives of the Government, trade unions and management, established by the Government in 1963 to make policy recommendations on general economic development — expressed its views on incomes policy.[149] It emphasized that the application to wages and salaries of the general principle of matching income increases to output depended upon overcoming the difficulties of applying the same principle to other incomes. This implies, to begin with, more adequate information about profits — of unincorporated business as well as of companies — and about professional earnings. Although profits cannot be directly controlled, their excessive growth can be to some extent restrained "by price surveillance and, where necessary, by price control"[150] as well as by "active policy to stimulate socially desirable competition". In addition, decisions about support for agricultural incomes should be taken "at the same time as — and recognized as an integral part of — decisions concerning non-agricultural incomes". Finally, in view of existing dissatisfaction with the distribution of income, it will be more difficult to restrain excessive expansion of income if there is no general agreement on what are "reasonable differentials between wages and earnings in different occupations, between wages and salaries, and between wages and salaries and other kinds of income". These difficulties can be met "only by a re-examination of methods of distributing incomes in the context of the various industries and occupations".

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[142] It might be expected that Irish wages and unemployment levels would move fairly closely with those in the United Kingdom, in view of the free movement of labour and the dependence on the United Kingdom market (about one-quarter of Ireland's GNP is exported to the United Kingdom). But, at least in the short term, no close numerical relationships are found. See C. St. J. OHerlihy, "A Statistical Study of Wages, Prices and Employment in the Irish Manufacturing Sector", Paper No. 29, Economic Research Institute, Dublin 1966.

[143] Average hourly earnings of adult male wage-earners in manufacturing in Ireland in early 1966 were about three-quarters of the corresponding figure for the United Kingdom.

[144] For year-by-year figures, see Appendix Table 3.I. Negative drift can occur when wage rate increases take the form of absolute amount (for example, £1 a week); the percentage rise in rates if the rates are below actual earnings is then greater than that in actual earnings.

[145] National Industrial Economic Council, *Report on Economic Situation 1965*, Dublin 1965, p. 9. The tendency may be to mark up prices to cover the immediate increase, but to fail to reduce prices when productivity rises in the second or third year.

[146] The terms of the central recommendation unfortunately failed to make it clear how allowance was to be made for reductions in working hours. A subsequent claim for reduced working hours led to a long strike in the construction industry. Apart from this and certain other disputes on interpretation, the application of the recommendation to industrial agreements ran fairly smoothly. (See OECD, *Economic Surveys: Ireland*, March 1965; and Charles McCarthy, "Trade Unions and Economic Planning in Ireland", *International Labour Review*, July 1966.)

[147] For example, in Parliamentary statement by Minister of Finance, *Financial Times*, 3 February 1966.

[148] McCarthy. *op. cit.* But hourly earnings in manufacturing in fact rose 9 per cent in 1966.

Italy

The problems of incomes policy in Italy must be seen against a complicated background. Its features are, first, the radical change in the labour market situation in the 1960s, and, second, significant developments of trade union and management attitudes and policies.

Among western European countries, Italy showed almost the smallest increase in industrial wage earnings in the 1950s and the largest increase in the early 1960s (Table 3.1). It was the only country in which unit labour costs in industry were falling in the 1950s; in the early 1960s the rise in unit labour costs was about the western European average (Table 3.2). This acceleration of pay increases and unit labour costs may be attributed principally to the great reduction in unemployment. The radical shift in the labour market has been accompanied by significant changes in wage bargaining opportunities and strategies.

In the 1950s, the weakness of the unions (although about half the industrial workers were in membership), the heavy weight of unemployment, the diversity in economic conditions between regions and between the few large enterprises and the mass of small firms,[151] all combined to limit the scope for effective collective bargaining. The weakness of the unions was accentuated by the split, after 1948, between the CGIL, the CISL and the UIL.[152] Moreover, union efforts at that time were concentrated on problems of general economic policy, and especially on raising the level of employment, rather than on improving the position of those already in work.

In these circumstances, collective bargaining was largely limited to the setting of national minima, by branches. On both sides, the bargaining was under the control of the central organizations — but more, on the union side, because the lower levels of organization were weak than because the federations were powerful. These minimum rates were largely governed by the financial possibilities for small firms and were supplemented by the development of social security benefits according to family circumstances. The minimum living standards were preserved, too, by the almost universal use of cost-of-living clauses in wage agreements (and in family allowances); the cost-of-living allowance currently amounts to over a tenth of the direct wage.

With diminishing unemployment and increasing difficulties in staffing the expanding industrial enterprises in the north, wage differentiation between enterprises began to increase. Until the early 1960s, it is probably true to say that this differentiation resulted predominantly from "employer-determined wage pull" rather than from union pressure. It was management — particularly in the great firms — which "called the tune" in the increase in actual earnings.[153] The formalities of negotiation may have been preserved in some cases, but by negotiation with the works committees, not with the unions.[154] At the same time, it is suggested, some of the great firms were in a position to influence the selection of works committee representatives so as to favour the more collaborative, and to make it clear that the determination of wage levels (and the provision of extra fringe benefits such as housing) resulted from management policy, not from bargaining pressure.[155]

In the early 1960s, the picture changed. In the new labour market situation, the unions began to develop a different strategy. The CGIL leaders, in particular, are said to have advanced "with a noteworthy lack of prejudice though often through the channel of tortuous ideological considerations, towards a method of bargaining that implies, if not the acceptance, at least the tolerance, of the 'capitalist system'".[156] The federations have begun not only to adopt a strategy of tougher and more realistic bargaining but also to co-operate with each other more widely in wage bargaining. In particular, the unions began to adopt a strategy of decentralized and plant bargains, seeking to substitute collective negotiation for management discretion especially in the great industrial firms — thus sacrificing the former policy of "solidarity" based on bargaining only for national minima. The issue came to a head in the dispute over the new agreement for metal-workers in 1962. After a number of co-ordinated strikes, the state-controlled enterprises,[157] and also Fiat and Olivetti, accepted a settlement with the unions. It was only some months later, after considerable resistance, that Confindustria accepted a similar settlement for metal-workers which allowed a limited amount of decentralized bargaining. This is described as the "articulated" bargaining system, which provides for a national agreement covering certain general issues, sector agreements providing for minimum rates which may differ according to the six sectors into which metals and metal-working was divided, and plant agreements about piece work, productivity bonuses, etc. The system spread quickly to other branches of industry. Far more decentralized bargaining, and in particular the recognition of the unions in bargaining at the plant level, appears to be the current trend and is likely to develop beyond the degree of autonomy prescribed in the system of "articulated" bargaining.[158] To become fully effective, of course, decentralized bargaining calls for a far more elaborate and more experienced union organization at a lower level than exists at present.

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[149] National Industrial Economic Council, *Report on Economic Situation, 1965*, Dublin, 1965.

[150] Under the Prices (Amendment) Act, 1965, the Ministry of Industry has, in fact, wide powers of price surveillance.

[151] About half of the workers in industry (in 1951) worked in units with 10 or fewer employees.

[152] *Confederazione Generale Italiana del Lavoro* (of nearly 3 millions, allied with the Communists and left socialists); *Confederazione Italiana dei Sindicati Lavoratori* (2 1/4 million, linked with the Christian Democrats); and *Unione Italiana del Lavoro* (3/4 million, linked with the Social Democrats and Republicans).

[153] M. Edelman and R. W. Fleming, "The Politics of Wage-Price Decisions", 1965, especially p. 39.

[154] The works committees are elected from lists nominated by the unions, but are not directly associated with the union machinery.

[155] Edelman and Fleming, *op. cit.*

[156] Giugni, "Recent Developments in Collective Bargaining in Italy", *International Labour Review*, April 1965, p. 282. The same tendency is reflected on the political level in the "opening to the left" in 1963, when the left socialists who are a significant element in the CGIL supported a left-centre government, and later reunited with the Social Democratic Party.

In this transitional period, the prospects for operating an incomes policy in Italy cannot be regarded as favourable. First, the differentiation of wages, between plants and between regions, is extremely large and is not likely to be much diminished by the changes in the wage-settlement process just described. Conventional pay rates (including the cost-of-living allowance) were estimated to represent about 85 per cent of the total wage and salary bill in 1961; but the proportion must have been very much less in the north [159] especially in the great industrial firms, and have fallen further in view of the subsequent wage drift. Secondly, the conflicts of interest and of opinion over the reconstruction of the pay-settlement system are still strong. While important elements in the unions are pressing for a controlled system of decentralized bargaining, opinion is not unanimous. On the employers' side, the principle of wage bargaining with the unions at a local or plant level is still repugnant to many managements. It is very doubtful whether either management organizations or the unions are in a position to effect a controlled rationalization of the structure of actual earnings.

There is even less short-term prospect of securing any effective control of non-wage incomes. Administrative machinery for price control machinery exists but its use is now limited to a few goods and services (public utilities, oil products, cement, glass and, among foods, cereals and sugar). The price controls for cereals and sugar are in any case by-products of a protectionist policy that keeps internal prices at a much higher level than those elsewhere; they can hardly be regarded as instruments for regulating industrial and commercial profits. It is, in any case, difficult to imagine that any serious control of non-wage incomes would be possible without a great extension of statistical information, in particular about profits and about the pattern of personal incomes for categories other than wage-earners. Without such information it seems impossible either to establish criteria or to test effectiveness. Finally, the unions might well make greater participation in the formation of general economic policy a condition of participation in an incomes policy. So long as monetary policy, effectively operated by the Central Bank, is the major instrument of short-term management, this participation presents certain difficulties.

Some consideration has, indeed, been given to the possibilities of organizing an incomes policy but it has not gone beyond appeals for restraint. Since 1963, the Governor of the Central Bank has emphasized the need for a co-ordinated incomes policy by agreement between the Government and the social partners; he agreed that monetary or credit policy has been an inadequate instrument for regulating demand.[160] (There has been little disposition to use fiscal policy, partly because of the defects of the fiscal machinery.)

In effect, the problem of cost inflation in Italy has so far been serious only for a comparatively short time — especially in 1962-1964. It was checked by heavy unemployment before those years, and, since the end of 1964, by the induced recession. In particular, the amount of drift was probably insignificant in 1965 and 1966. But the current vigorous upturn in demand and output is likely to lead, with some delay, to a restoration of wage pressures. It can hardly be expected, in the present transitional state of bargaining machinery, that a policy of pay restraint could be formally agreed by the unions.

Switzerland

Swiss experience is a remarkable example of relatively weak pressures on wages and salaries in the face of a continuously tight labour market. The explanation lies chiefly in the access of Swiss employers to the labour markets of southern Europe but partly also in the moderate policies pursued by the Swiss unions, and in a liberal import policy. Thus in the 1950s the rate of pay increases was among the lowest in western Europe although unemployment was throughout negligible.[161] Switzerland did not escape the common acceleration of pay increases in the 1960s, and unit labour costs increased, but less than in most countries. Moderate increases in conventional rates were accompanied by a significant amount of drift (Tables 3.1 and 3.2).

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[157] The management side of the state-controlled enterprises, including IRI and ENI, conducts wage bargaining through an organization *(Intersind)* which is separate from the private industrial employers' organization, *Confindustria.*

[158] During the recession period of 1963-1964, there has been a certain reversion towards centralized bargaining especially because of the emphasis on shorter hours of work which is a matter normally dealt with centrally.

[159] In 1961 it was found that in the North 78 per cent of enterprises were paying over the conventional rates, while in the South the proportion was only 57 per cent (from sample inquiry into 2,000 enterprises quoted by O. Scarpat, "Considerazioni sul wage drift", *Politica Sindicale*, October-December 1961).

[160] See, particularly, Bank of Italy, *Annual Report for 1963.*

The collective bargaining structure has been stable enough to absorb the great inflow of foreign workers. Thus, although the foreign workers are predominantly to be found in the unskilled occupations, the relationship between skilled and unskilled earnings has hardly varied. Average hourly earnings of semi-skilled and unskilled men wage-earners have remained at 82-83 per cent of those of skilled workers over the last 15 years.[162] At the same time, contrary to the more common trend, there has been no tendency—possibly due to a change in the employment structure—for women's wages to rise relatively to men's (average women's hourly wage-earnings were 65 per cent of men's in 1962, falling to 63 per cent in 1965).[163]

The system was put to a fairly severe test after 1964. On the one hand, it was felt that a weakening balance of payments and excess pressure of domestic demand called for general restraints on the economy. Credit controls and building licences were instituted. At the same time, for various reasons it was decided to strengthen the restrictions on immigration, which had been imposed first in 1963.[164] There was consequently a risk that, if the reduction in the labour supply proved in excess of the induced reduction in demand, the stability of the wage structure would be further endangered. Employment in early 1966 was about 1 per cent down on the year before, entirely due to the reduction in the number of foreign workers; there was no significant rise in unemployment.[165] Yet no significant extra pressures on wages seem to have appeared. Hourly earnings in industry (in 1965 and 1966) have been rising at the rate of 7 per cent a year, but this represents no acceleration as compared with the steady rates of increase since 1962.

There has been no widespread discussion of whether any steps should be taken towards formulating a continuous incomes policy.[166]

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[161] The number of foreign workers subject to control, or "established", grew from about an eighth to a quarter of the active population between 1954 and 1965.

[162] While the massive entry of foreign workers into the unskilled occupations has kept the increase in unskilled wages low, there has been a corresponding shift of Swiss workers into the better-paid jobs.

[163] Another special feature of the Swiss wage structure is the practice in most trades of incorporating small family allocations in wages. The average conventional rate for a married man with two children is about 7 per cent greater than that for a bachelor, and for a married man without children 1 per cent greater (*La vie sociale*, May 1966, p. 259).

[164] It was indeed suggested that the inflow of foreign workers contributed to the "overheating" of the economy, although in fact it seems more reasonable to suppose that foreign workers, who spend in Switzerland only a proportion of their earnings, would moderate the pressure of demand in relation to output. The main reason for restrictions on immigration is rather the fear of excessive dependence on external sources of labour supply.

[165] In July 1966, near the seasonal low point, the total number of wholly unemployed registered in Switzerland was 132 against notified vacancies of about 5,000.

[166] Strong opposition to any attempt to exercise Government influence over wage bargaining is expressed by *l'Union syndicale suisse* (in an article reproduced in part by *La Tribune de Genève*, 6, 7-8 September 1966).

CHAPTER 5

LONG-TERM TRENDS IN PAY DISTRIBUTION

INTRODUCTION

This chapter is concerned with analysing various aspects of the distribution of wages and salaries during the past 10-15 years. Pay differentials are of many kinds, because remuneration may vary according to the branch of industry, the geographical area, the occupation, the enterprise, the sector of the economy (whether public or private) and according to personal characteristics including sex and age. The overall distribution of pay, and these differentiating factors, evolve over time and differ between countries. This evolution is not necessarily continuous. Occupational differentials, in particular, appear to be subject to rather sudden changes provoked by exceptional events such as war — as though a traditional pattern had been artificially maintained in spite of being out of date. One purpose is to try to identify, from the observation of pay structures in western Europe, any characteristics of a pay dispersion which are most likely to create tensions and which thus provide a weak foundation for any short-term incomes policy aimed at the control of total or average pay.

Hitherto, as the previous chapter has shown, there have been few examples in western Europe of a conscious long-term policy for pay differentials — although the problem has been acknowledged (notably in France and the United Kingdom). It is true that in the Netherlands the authorities have tried for a decade to operate an explicit policy of differentials, but, after certain initial modifications, the pay structure has in fact hardly changed. In the Scandinavian countries, too, the central negotiators have endeavoured to bring about some long-term modifications of the pay structure.

Trade union leaders, employers and economists have expressed very divergent views about the principles which ought to govern the distribution of earnings. Some advocates of diversity in earnings, or even of complete freedom, emphasize the importance of allowing free play to market forces as the best way of securing the optimal allocation of labour, implying that pay differences provoke the required mobility of workers. This view is one held chiefly by employers, who are also reluctant to impose a uniform wage level which marginal enterprises would be unable to pay.

Against this, trade unions generally advocate the principle of the standard rate, the "rate for the job", or "equal pay for equal work", under which pay would differ only according to the nature of the work. Differences not so justified are regarded as offensive to equity and as representing simply a subsidy to inadequate managements. At the same time, it may be held that pay differences are not in fact an effective incentive to mobility, which can be better secured, where it is required, by more stable employment, better provision of housing or more adequate training. From the point of view of economic efficiency, too, some would suggest that pay at below the standard level merely protects inefficient enterprises whose manpower could be better used elsewhere. Actual pay structures result partly from the interplay of these conflicting forces, partly from such general policies as exist for maintaining minimum pay levels, and, perhaps more important in practice, from the dominating inertial force of tradition and custom.

Statistical analysis of the factors determining pay structures is complicated by the number of factors involved. It is rare to find one variable changing while the rest remain constant; and, in any case, the degree of detail, and imperfections, in the data available rarely permit the isolation of each variable. It is often impossible to do more than indicate the marginal influence of a particular factor.

The chapter deals: first (in 5.1), with average pay by industry, including an investigation of the extent of correlation between movements in employment and the relative levels of pay, or changes in relative pay, between industries; and secondly (in 5.2), with changes in occupational differentials.

5.1. RELATIVE PAY BY INDUSTRY

Many factors might be expected to contribute to inter-industry pay differentials. Some are related to the nature of the work: for example, the generally lower cost of living for agricultural than urban workers; the arduous and dangerous work of miners; the security offered by public service. But so far as these characteristics are fairly stable over time, and even between countries, they are, for the most part, left aside here. By contrast, other factors, more closely linked to changing economic conditions or to structural transformations resulting from technical progress or economic growth, deserve special examination. Thus it is important to investigate how far changes in the occupational distribution of manpower have influenced the pay structure by industry. It is important, too, to ask how far relative pay changes by industry are linked with changes in productivity and profits — although, because of the weakness of the data, only a rather superficial examination is possible.

To isolate so far as possible the influence of changes in manpower distribution between major occupational groups and between the sexes, separate figures will be presented for wage-earners and salary-earners, and for men and women.[1] This does not, of course, eliminate the influence of the changing occupational distribution within each group. It must also be recognized that the variables retained in the analysis are inter-dependent: the extensive employment of women may influence the relative pay of men in a particular industry; or the pay level in an industry may be influenced by its location. A more detailed study of relative pay by occupational qualifications, sex and age — the characteristics attaching to the individual rather than to the enterprise in which he works — is the subject of section 5.2.

The ranking and dispersion of pay by industries

Earnings have been grouped by branches and industries according to the classification below. Although based on the International Standard Classification, the one used here is necessarily rough and may not be fully comparable from country to country. The figures relate to effective earnings, not to conventional rates of pay; but — according to the data available for each country — they refer sometimes to hourly, sometimes to weekly or monthly, and sometimes to annual, earnings.[2]

Industrial classification

	ISIC Code
Mining and quarrying	1
Manufacturing industries	2-3
of which :	
Food, beverages and tobacco	20-22
Textiles	23
Clothing, footwear and made-up textiles	24
Chemicals	31
Basic metals	34
Metal-using industries (including machinery and transport equipment)	35-38
Other manufacturing	25-30,32,33,37
Construction	4
Gas, electricity, water	5
Trade and banking	6
Transport, storage and communications	7
Private sector services	83,84,85

It has not been possible to include in the tables and charts in this section either agriculture or public administration; data on earnings in these sectors are available for only a few countries, and no more than general comments can be made. For some of the branches for which data are available, the data are somewhat fragile for international comparison — notably for private services and transport (where the coverage is often incomplete and varies from country to country).

The course of relative earnings during the period 1953-1965 is displayed in Chart 5.1 for the major manufacturing branches, and in Chart 5.2 for non-manufacturing branches. In each branch, earnings are expressed as percentages of average earnings in each year in manufacturing as a whole.[3]

At first sight, the charts convey the impression of a remarkable stability in the pay structures, apart from the special case of mining. Nevertheless, there is evidence of a certain narrowing of the dispersion in some countries and of widening in others. Some generalizations emerge from examining the trend of relative earnings in each branch, beginning with wage-earners.

Among manufacturing industries, the first three groups — food, beverages and tobacco; textiles; and clothing and footwear — all generally occupy throughout the period rather a modest place in the hierarchy of wage earnings, although less so for women than for men. There are a few prominent exceptions: in Austria and the Netherlands, earnings in the food, beverages and tobacco industries, and in Denmark in the clothing and footwear industries, come close to the average level in manufacturing as a whole. In *food, beverages and tobacco*, relative earnings have tended to increase slightly in western Germany (coming close to the average for manufacturing in the 1960s), the Netherlands, Sweden and the United Kingdom.

In the *textiles* group, the trend in relative earnings has been generally less favourable — declining slightly in Denmark, the Netherlands, Norway and the United Kingdom, and increasing only in western Germany. These changes have been small, however, in view of the very significant transformation of techniques and organization in this group of industries in several countries. These changes may have tended to reduce the proportions in the labour force both of highly skilled workers and of the least qualified. In the *clothing and footwear* industries, too, there have been important structural changes,[4] but their place in the wage structure has not altered much (a certain improvement in western Germany, as for textiles, and a deterioration in Switzerland). It may be noted that in the Scandinavian countries and Switzerland — unlike the rest — male earnings in clothing and footwear appreciably exceed those in textiles.

We turn now to three "growth industries" — chemicals, basic metals, and metal-using. In all three, earnings equal, or somewhat exceed, the average level for manufacturing

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[1] Figures for women's earnings are given only for those industries in which women are an important proportion of the labour force.

[2] Where there is a choice, weekly or annual earnings have been taken. It will be recognized tha tthere may be systematic differences in trend between annual, weekly and hourly earnings: hours worked tend to diminish over the long period but the amount of overtime work also fluctuates cyclically, and to a different extent in different industries.

[3] It would no doubt have been preferable to relate earnings in each branch to the average for the whole economy; but because of the diverse coverage of the total, this was impracticable.

[4] An inquiry made in France (in the hosiery and under-garment industry) showed that between 1938 and 1964 the proportion of semi-skilled workers rose from a quarter to a half of the total labour force, while the proportion of skilled workers fell from nearly half to 15 per cent. M. Mignot, "L'évolution des qualifications professionnelles", *Revue française du travail*, April-June 1964.

Chart 5.1

Average earnings in the manufacturing industries of selected western European countries

(As percentage of average earnings in total manufacturing)

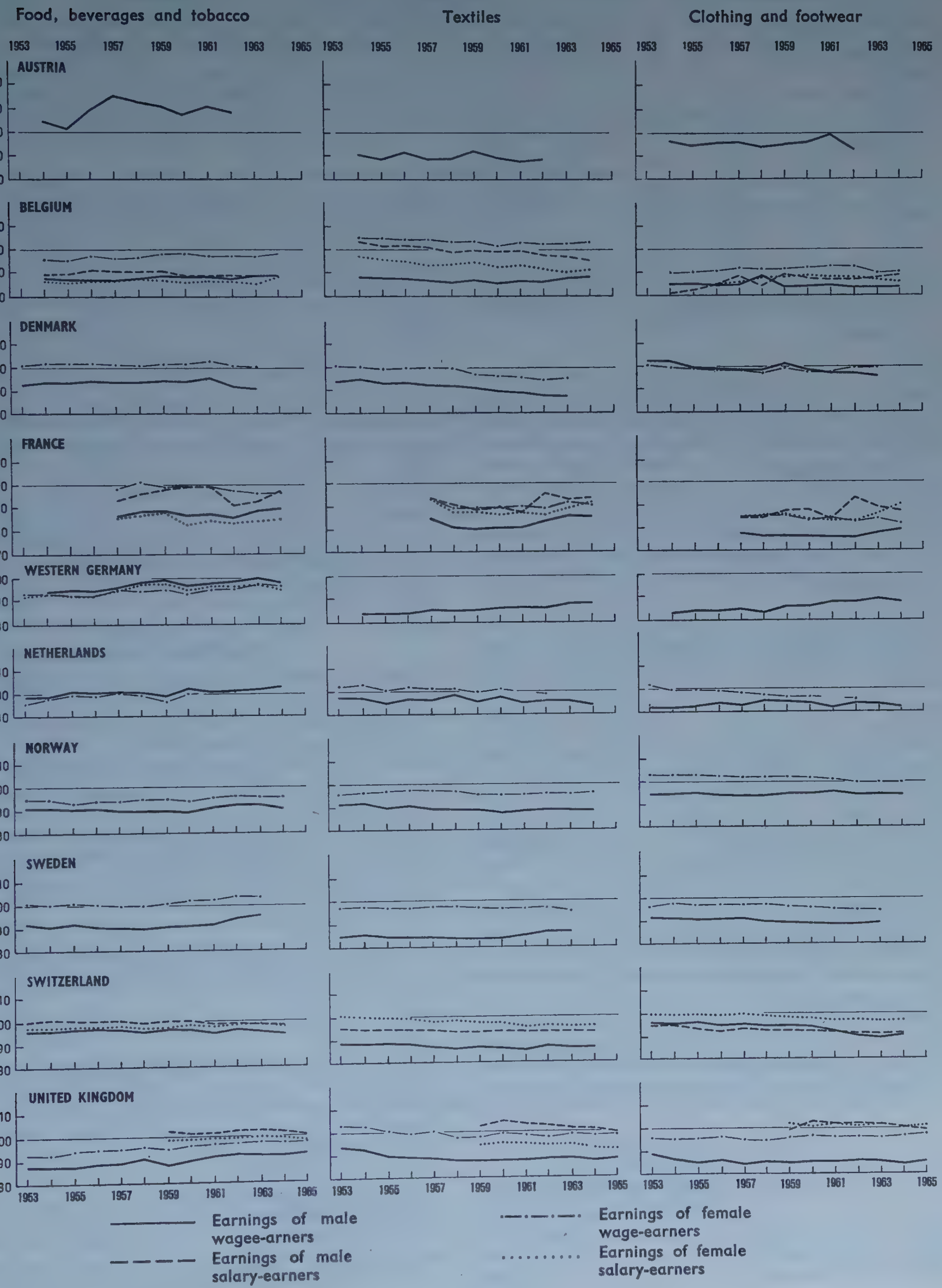
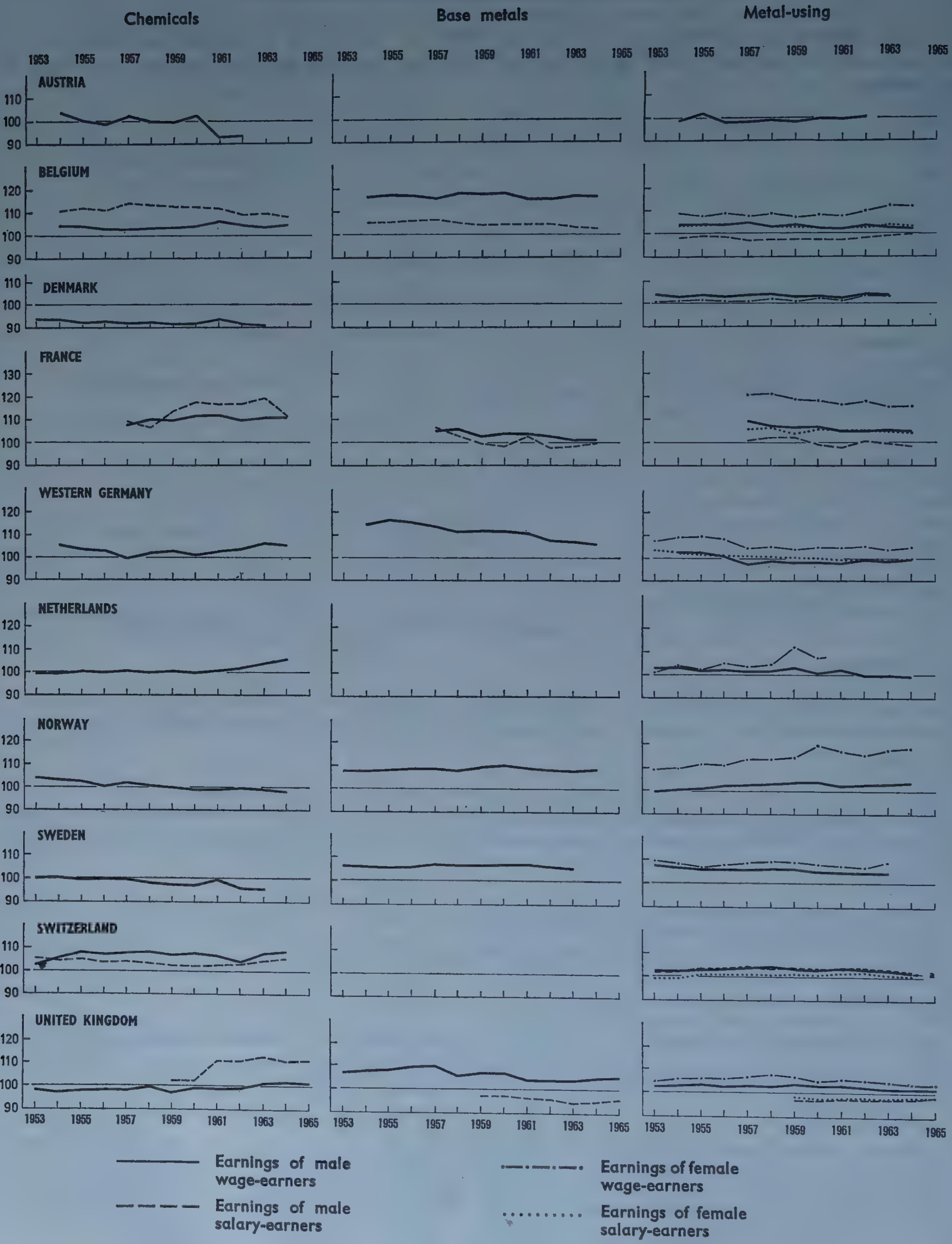


CHART 5.1 *(continued)*



NOTE. — a Includes base metals.
Sources and methods: see pages 33-34.

is a whole (with the single exception of chemicals in Denmark).

In *chemicals,* average earnings are in most countries close to the average for manufacturing; they have been rising slightly, in relative terms, in the Netherlands and the United Kingdom, and falling quite markedly in Austria and slightly in the Scandinavian countries.

In *basic metals,* earnings are everywhere above the manufacturing average but their relative advantage has been diminishing in France and western Germany and, though less certainly, in the United Kingdom.

The *metal-using industries* — whose composition, of course, varies considerably from one country to another — show earnings distinctly above the manufacturing average, except in Austria, western Germany, the Netherlands and Switzerland, where they are close to average. Changes in relative earnings have not been marked — a slight decline in Belgium, western Germany and Sweden, some rise in Norway. Such information as is available suggests that within this group earnings in motor-car manufacturing are generally well above the average.[5]

Earnings in the remaining group — "*other manufacturing*" — cover too heterogeneous a collection of industries to be usefully included in the chart. It is worth noting, however, two special cases within this group: oil refining and printing. In both, relative earnings are generally very high — aided in oil refining by the high capital intensity, in printing by the success enjoyed by trade unions in maintaining a privileged position in an industry largely sheltered, in the past, from international competition. Table 5.1 shows how general is this phenomenon of high wages in printing — except in two countries, Belgium and the Netherlands.

TABLE 5.1

Earnings of male wage-earners in the printing and publishing industry

As percentage of earnings in total manufacturing

Country	Around 1954	Around 1963
Austria	138	137
Belgium	107	103
Denmark	117	123
France	130	130
Western Germany	116	116
Netherlands	107	103
Norway	116	118
Sweden	111	113
Switzerland	120	116
United Kingdom	109	120

Sources and methods: see pages 33-34.

Among the non-manufacturing industries, *mining* has passed through two phases. In the immediate postwar years high demand, especially for coal, was accompanied by a substantial rise in relative wage-earnings — to 10-20 per cent above the average for men in manufacturing. Subsequently, the radical changes in the energy situation brought about a fall in employment, and reductions in relative pay which were particularly marked in western Germany, the Netherlands and the United Kingdom. In France, the relative advantage of mining pay had practically disappeared by 1962-1963; the strike in 1963 expressed the miners' bitterness and was followed by cautious steps on the part of the French Government towards restoring relative pay, with the help of subsidies.[6] In Belgium, on the other hand, relative pay of miners has been approximately maintained throughout the decade.

The wide variation between countries in relative pay in *construction* may appear surprising in view of the very general pressure of demand on the industry. In Norway and Sweden, wage-earnings in construction are 20-30 per cent above the manufacturing average, in Denmark and the Netherlands up to 10 per cent above, in Austria, Belgium and western Germany close to the average and in France[7] and the United Kingdom well below it. The relative position has, if anything, improved slightly during the period but has nowhere changed much. Two reasons may be suggested for these marked differences between countries. First, the supply of labour for construction, in the countries where pay is no more than average, or below average, depends heavily on an inflow of workers either from abroad or from agriculture. In the Scandinavian countries and the Netherlands, where relative earnings are high, there has so far been comparatively little immigration. In the Scandinavian countries, another reason may also be relevant. In the past, construction work was heavily reduced in winter and high wages for a limited part of the year were recognized as necessary to maintain a reasonable annual income. The development of winter building methods has ironed out much of the seasonal variations in employment in these countries. Yet the pay differentials have been largely preserved — a striking example of the force of tradition in the pay structure in an industry sheltered from international competition.[8]

Wage-earnings in *gas, electricity and water* are well above the average for manufacturing in Belgium, France and western Germany, about average in Denmark and somewhat below in the United Kingdom. They have increased considerably in Belgium, but not elsewhere. This industry provides one of the few examples (basic metals also provides some) where men's wage-earnings substantially exceed the pay of men salary-earners (in Belgium — where the excess has been increasing — in France and western Germany, but not in the United Kingdom).

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[5] For example, in the United Kingdom, average earnings of men wage-earners in motor-car manufacturing in 1964 were about 20 per cent above the average for the metal-using industries.

[6] This procedure has served as a precedent for other nationalized enterprises in France.

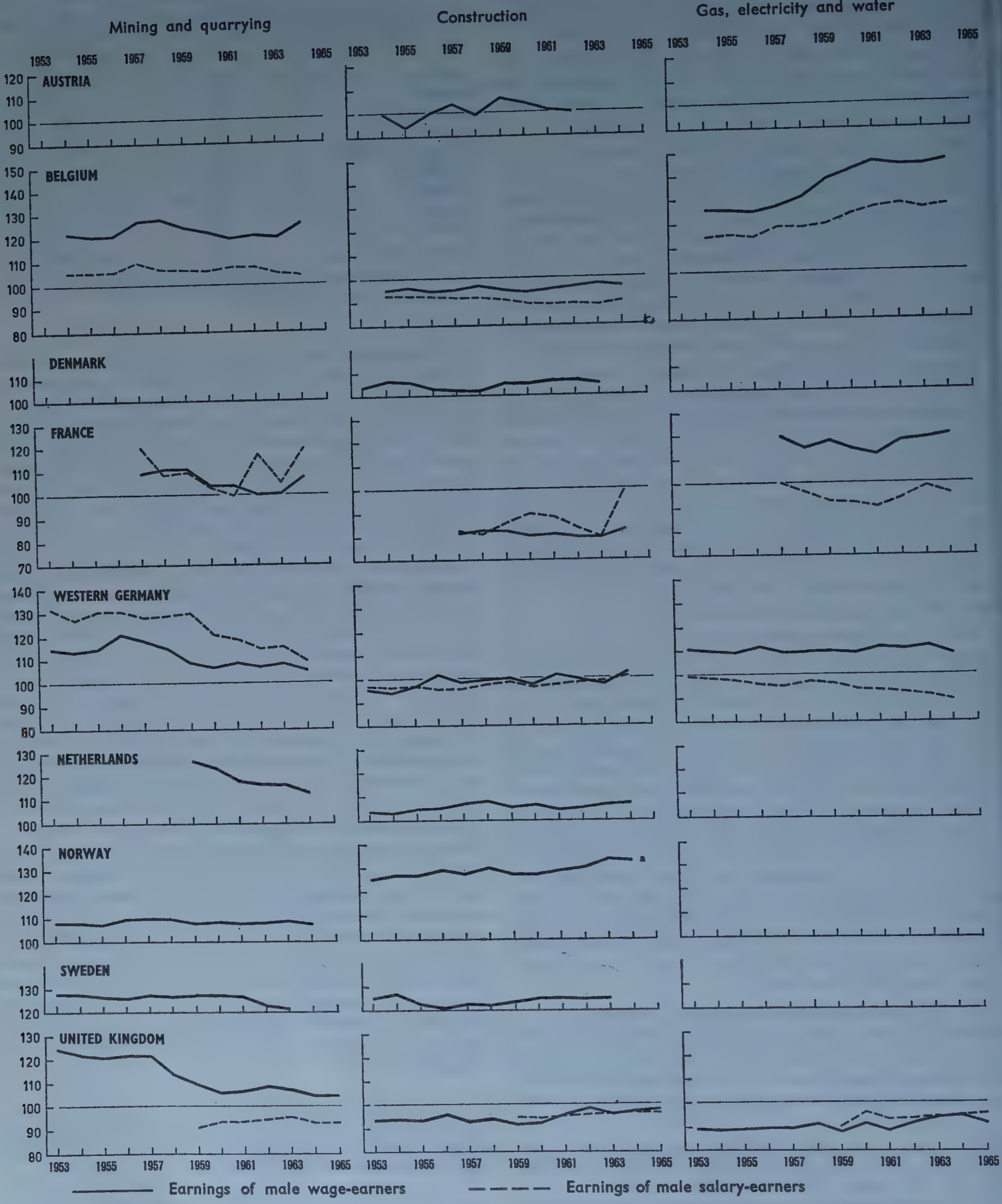
[7] The earnings figures for France relate to annual earnings of workers who have not changed their employer during the year. Effective hourly rates of pay in construction are 2 or 3 per cent below the average for manufacturing.

[8] The high level of pay has not apparently prevented a substantial rise in profits. See the estimates for Norway given in Chapter 2, page 27.

CHART 5.2

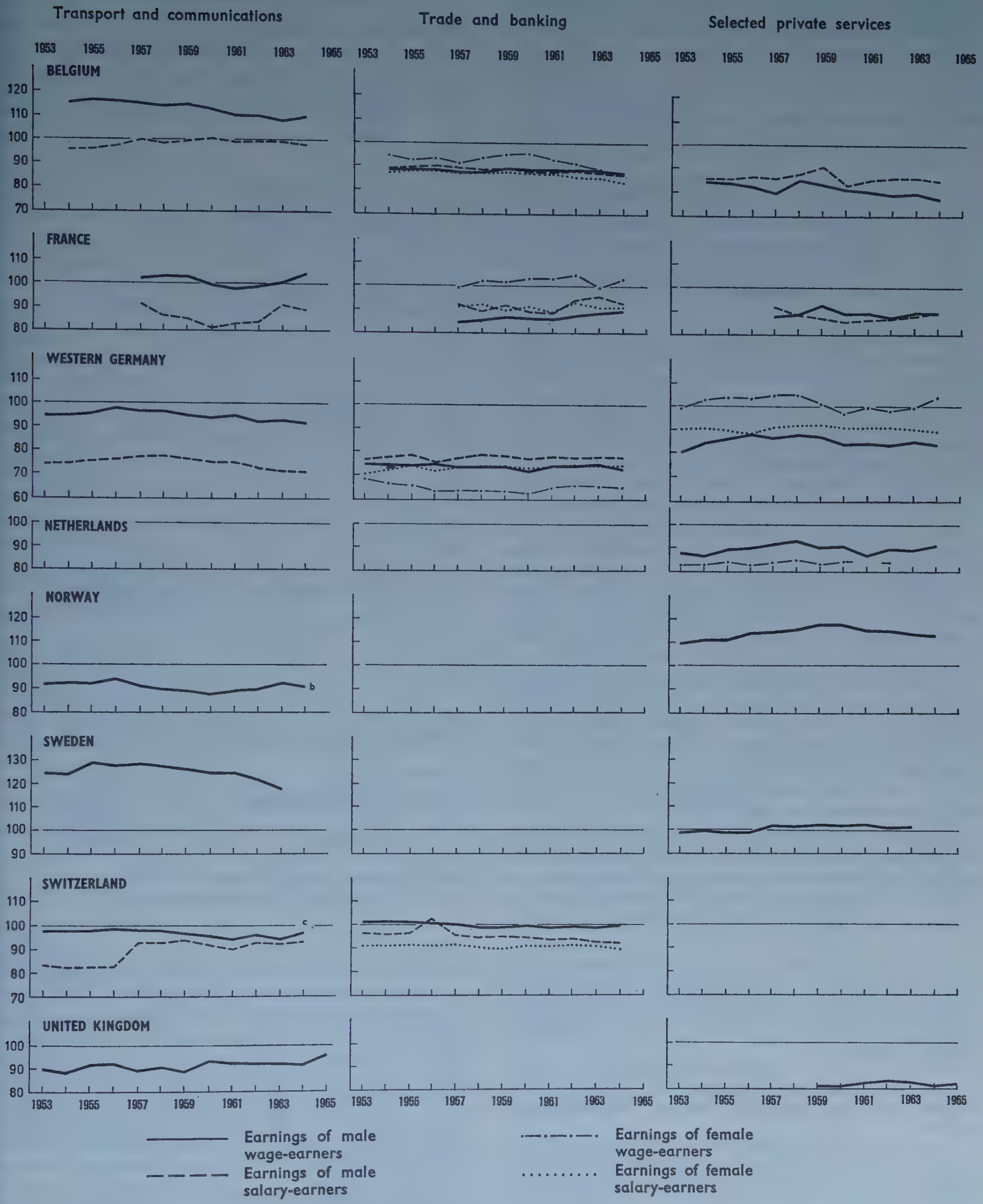
Average earnings in various non-manufacturing branches of selected western European countries

(As percentage of average earnings in the manufacturing branch)



NOTE. — [a] Private sector only.

CHART 5.2 *(continued)*



NOTES. — [b] Land transport only. [c] Private transport only.

Sources and methods: see pages 33-34.

The statistics for earnings in *transport* are difficult to interpret because of differences in the branches of transport covered (indicated in the tables). Relatively high wage-earnings in Belgium and Sweden contrast with below-average earnings in western Germany, Norway, Switzerland and the United Kingdom. An important element in transport earnings everywhere is the level of earnings in the railways and in other public transport — branches where pay rates are set by the government or by collective negotiation without substantial opportunities for wage drift. Where, as in France or the United Kingdom, pay settlements have taken little account of the growth of wage drift in other employment, this fact, added to the financial problems of public transport, is likely to keep relative earnings down.[9] In Sweden, by contrast, the system of pay settlement has preserved a high (although somewhat declining) differential in transport.

In the other service industries — *trade and banking* and *other private services* — the heterogeneity and incompleteness of the statistics impair comparison. However, the general impression is that in these branches relative earnings have been fairly stable at levels rather below the manufacturing average (although this is not true of women wage-earners in trade and banking in France, or, in the case of "other private services", of women in western Germany and men in Norway).

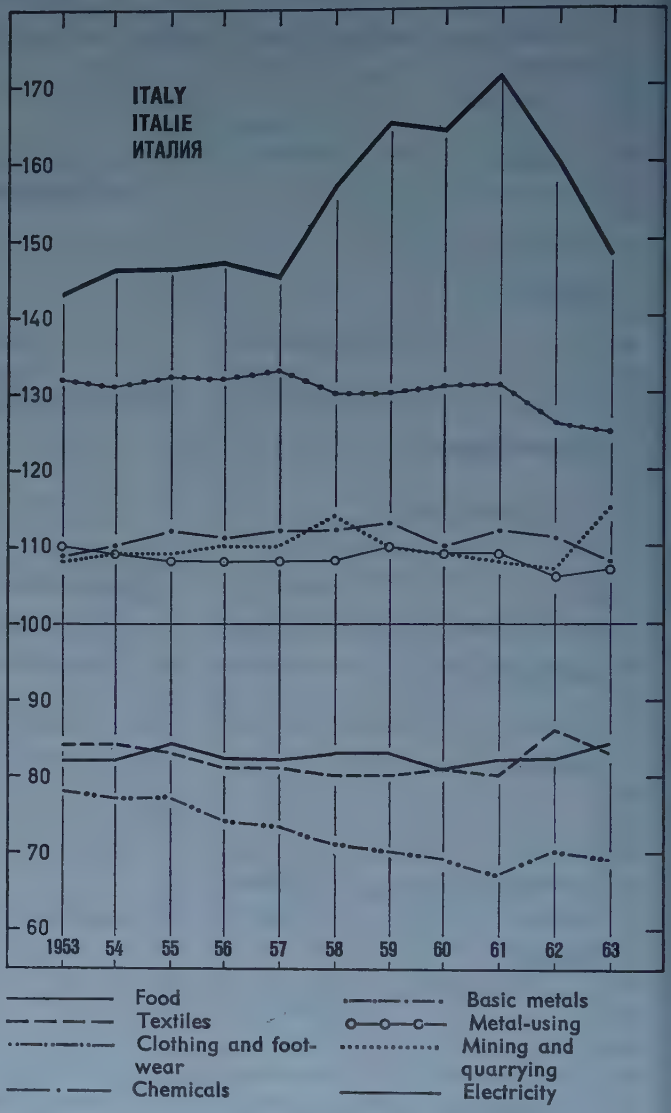
So far, attention has been concentrated mainly on wage-earners. For salary-earners, whether men or women, the differences between industries are generally much narrower than for men wage-earners.[10] The reason may well lie in the greater similarity of salary-earners' occupational structure and type of work as between different industries, and perhaps in their greater mobility.

To some extent, the same narrowness of dispersion applies to women's wage-earnings, when compared with those of men. There is hardly a single case in the charts in which women wage-earners deviate from the manufacturing average (for women) by more than about 10 per cent, while considerably greater deviations for men wage-earners are quite common.[11]

CHART 5.3

Italy : Earnings of wage-earners [a] in selected industries

(As percentage of earnings in manufacturing)



Sources and methods: Rassegna di Statistiche del Lavoro.

[a] Based on hourly earnings of male and female wage-earners.

It has not been possible to include Italy in Charts 5.1 and 5.2 because the only data relate to earnings of wage-earners for both sexes; these figures are shown in Chart 5.3. There is no significant difference in the ranking of average earnings by industries,[12] as compared with that in other countries of western Europe, except that mining — which is unimportant in Italy — has a lower rank.

The most striking feature is the progressive widening of the range until 1961 and a certain narrowing thereafter. It appears that expansion, until the nineteen-sixties, especially favoured earnings in some of the most dynamic industries — particularly electricity and chemicals — which were able to find additional manpower easily, while earnings in other industries — notably textiles and clothing — fell further behind. At a certain point, it was no longer possible to attract new labour into the expanding industries without affecting the wage conditions in the "poor" industries, which began to catch up.

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[9] See Chapter 3, pages 27 and 28. In the United Kingdom, average weekly wage-earnings of men in British Railways, in 1964, were about 10 per cent below the manufacturing average. In France, annual earnings of male wage-earners in nationalized transport and communication services were, in 1963, 15 per cent below the manufacturing average.

[10] There are certain exceptions — for example, the relatively high level of salary-earnings in mining in western Germany, which has nevertheless been declining in sympathy with relative wage-earnings.

[11] Exceptions are: metal-using industries in France and Norway (where women exceed the average more than men, possibly because they are concentrated in high-wage branches) and trade and banking in western Germany (where women fall below the manufacturing average even more than men).

[12] For construction, data on annual wages per man-year suggest that earnings were substantially below the level of manufacturing earnings. See Giuseppe de Meo, "Produttività e distribuzione del reddito in Italia nel periodo 1951-1963", pp. 216-7, published in *Annali di Statistica*, Series VIII, Vol. 15.

Industry ranking and dispersion

The same impression of the relative stability of the pay structure over time is conveyed when the industries are arranged in rank order (Table 5.2 for men wage-earners and Table 5.3 for men salary-earners). The ranking brings out certain common features of the pay structure in most countries, and also some differences. Among men wage-earners, taking an unweighted average of the nine countries shown,[13] the top ranks are held by mining and by

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[13] Some distortion is introduced by the absence of data for some branches in some countries.

Table 5.2

Ranking of earnings of male wage-earners in 13 industries

Industry	Belgium		Denmark		France		Western Germany		Netherlands		Norway		Sweden		Switzerland		United Kingdom		Average rank	
	1954-1956	1962-1964	1953-1955	1961-1963	1957-1959	1962-1964	1953-1955	1962-1964	1953-1955	1962-1964	1953-1955	1962-1964	1953-1955	1961-1963	1953-1955	1962-1964	1953-1955	1963-1965	First period	Second period
Mining	2	2	..	..	2	5	2	3	1	1	3	4	1	2	..	..	1	1	1	1
Manufacturing																				
Food, beverages and tobacco	11	10	6	5	9	10	8	7	5	4	11	9	9	9	6	5	10	9	10	9
Textiles	10	11	5	7	12	11	12	11	6	7	10	11	11	11	8	8	7	10	12	13
Clothing and footwear	12	12	3	3	13	13	11	10	8	8	8	8	10	10	5	7	11	11	12	12
Chemicals	5	5	7	6	3	2	4	4	4	3	5	6	6	7	1	1	5	4	5	4
Basic metals	3	3	2	2	5	4	1	2	3	5	6	3	5	4	2	2	2	2	2	3
Metal-using	6	6			4	3	5	6			4	5	4	5			3	3	4	5
Other	8	8	4	4	7	7	9	9	7	6	7	7	8	8	7	4	4	5	8	8
Construction	7	7	1	1	11	12	6	5	2	2	1 [a]	1 [a]	2	1	..	..	6	6	6	6
Electricity, gas and water	1	1	..	..	1	1	3	1	..	..	..	..	..	..	..	..	9	8	3	2
Trade and banking	9	9	..	..	10	8	13	13	..	..	..	..	..	..	3 [b]	3 [b]	..	..	11	10
Transport and communications	4	4	..	..	6	6	7	8	..	..	9 [c]	10 [c]	3	3	4 [d]	6 [d]	8	7	7	7
Other services, private	13	13	..	..	8	9	10	12	9	9	2	2	7	6	..	..	..	12	9	11

Sources and methods: see pages 33-34.

[a] Private construction only.

[b] Trade only.

[c] Land transport only.

[d] Private transport only.

Table 5.3

Ranking of earnings of male salary-earners in 13 industries

Industry	Belgium		France		Switzerland		United Kingdom		Average rank	
	1954-1956	1962-1964	1957-1959	1962-1964	1953-1955	1962-1964	1959-1961	1963-1965	First period	Second period
Mining	4	3	1	1	..	..	9	10	3	4
Manufacturing										
Food, beverages and tobacco	10	10	7	9	3	3	5	3	8	8
Textiles	5	7	8	7	6	5	2	4	6	7
Clothing and footwear	13	13	12	11	6	7	4	5	10	12
Chemicals	2	2	2	2	1	1	1	1	1	1
Base metals	3	4	3	5	2	2	7	8	2	5
Metal-using	7	6	4	4			6	6	4	3
Other	6	8	5	3	5	4	4	2	5	2
Construction	9	9	13	10	..	..	8	7	12	10
Electricity, gas and water	1	1	6	6	..	..	10	9	7	6
Trade and banking	10	10	9	8	4	6	..	..	9	9
Transport and communications	8	5	11	13	8	8	..	..	11	10
Other services, private	12	12	10	12	..	..	..	..	13	13

Sources and methods: see pages 33-34.

TABLE 5.4

The range of earnings of male wage-earners in 13 industries

As percentage of the lowest industry

A. With the two extreme values B. Excluding the two extreme values

Year	Belgium		Denmark [a]		France		Western Germany		Netherlands [b]		Norway [c]		Sweden [c]		Switzerland [d]		United Kingdom [c]	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1953 .	..	..	112	111	..	..	..	..	..	113	138	120	151	137	116	106	142	120
1954 .	150	144	113	110	..	..	155	143	..	112	140	121	150	140	119	106	140	123
1955 .	150	142	115	111	..	..	157	136	..	113	141	123	153	141	122	107	141	123
1956 .	152	143	111	110	..	..	155	137	..	112	142	125	151	141	122	110	141	122
1957 .	160	150	111	111	154	134	156	132	..	115	142	127	152	142	124	109	144	124
1958 .	154	144	111	110	150	137	151	132	..	114	146	128	153	141	125	110	132	121
1959 .	167	148	116	112	153	138	152	129	141	112	143	132	153	141	123	108	129	122
1960 .	176	145	117	113	150	139	157	128	137	113	145	134	153	140	124	109	124	121
1961 .	183	142	119	109	147	138	151	131	137	114	145	130	150	140	124	111	124	118
1962 .	183	145	121	114	156	138	150	133	130	112	146	129	142	139	119	114	126	117
1963 .	182	144	120	114	152	139	151	129	131	115	150	123	140	136	124	114	125	117
1964 .	190	151	..	..	151	133	151	128	125	116	150	125	..	..	125	112	124	119
1965 .	..	..	..	..	..	..	..	127	..	..	..	..	..	..	..	..	123	119

Sources and methods: see pages 33-34.

[a] 7 industries.

[b] 10 industries.

[c] 11 industries.

[d] 8 industries.

gas, electricity and water. Differences from this average rank are not great, except for the low position held by gas, electricity and water in the United Kingdom. Basic metals, metal-using and chemicals come next. Construction, as already indicated, shows the greatest differences n rank — at the top in the three Scandinavian countries and the Netherlands, near the bottom in France, and in the middle in Belgium, western Germany and the United Kingdom. The lowest ranks are held by trade and bankng (except in Switzerland, where trade ranks high), private services (but Norway is an exception), clothing and footwear (but not in Denmark or Switzerland), and textiles (though in Denmark and the Netherlands textiles are near the middle). Over the decade, there have been few significant changes in rank; the main ones (the only changes of more than two places) are the decline of mining in France, of basic metals in Norway, of textiles in the United Kingdom, and of other manufacturing in Switzerland.

For men salary-earners the ranking is not dissimilar for the four countries shown in Table 5.3.

While the ranking of industries is thus fairly similar between countries — with the exceptions noted — and has changed comparatively little, the actual amounts of inter-industry differentials vary quite substantially. Table 5.4 shows the dispersions for men wage-earners and Table 5.5 for men salary-earners, measured by the percentage excess of the highest over the lowest earnings (and also — because of the influence of extreme values — of the second highest over the second lowest). In Table 5.6 the dispersions are measured by the standard deviations of earnings between industries.[14]

From these different measures, the countries may be divided into three groups according to the dispersion of earnings by industry for men wage-earners. The countries with relatively narrow differences are Austria, Denmark, the Netherlands and Switzerland; those in the middle are the United Kingdom, Sweden, Norway and western Germany; those with the widest differences are France and Belgium.[15]

For men salary-earners, data are shown only for four countries which fall in the following order: the United Kingdom, Switzerland, France, Belgium (with the biggest differences). In each of these countries except Switzerland, the dispersion for salary-earners is shown to be much less than for wage-earners, as was indicated in Charts 5.1 and 5.2.

Over the decade, the inter-industry dispersions have shown disparate tendencies. They widened over the whole period in Belgium, Denmark, the Netherlands, Norway and Switzerland. By contrast they narrowed in western Germany, Sweden and the United Kingdom. In France, the dispersion remained fairly stable until 1963-1964, when it narrowed, but perhaps only temporarily, as a result of the recession.[16] The same trends are followed by men salary-earners in the four countries for which figures are available.

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[14] These measures of dispersion are influenced by the fact that for several countries data are not available for all thirteen industries. They are also affected by the fact that the figures of earnings are not comparable. Moroever, since, other things being equal, hours worked are bound to be correlated with average hourly earnings (because of the influence of overtime), the dispersion of hourly earnings will be less than that of weekly or annual earnings.

[15] It should be noted, however, that among the countries with a narrow dispersion are Denmark and Switzerland; the narrow dispersion here may be partly due to the absence of a significant mining industry and to the absence of statistics for gas, electricity and water — both industries normally showing high differentials.

[16] It is noticeable that in other cases (Belgium, western Germany in 1958) the dispersion narrowed temporarily in a recession period.

TABLE 5.5

The range of earnings of male salary-earners in 13 industries

As percentage of the lowest industry

A. With the two extreme values B. Excluding the two extreme values

Year	Belgium		France		Switzerland		United Kingdom	
	A	B	A	B	A	B	A	B
1953	..	..	..	..	127	107	..	..
1954	138	129	..	..	127	108	..	..
1955	137	131	..	..	128	109	..	..
1956	134	128	..	..	126	112	..	..
1957	139	133	146	130	126	111	..	..
1958	144	130	134	126	125	111	..	..
1959	141	125	133	128	124	111	124	113
1960	149	135	145	120	126	110	119	112
1961	151	132	141	124	129	111	119	111
1962	153	127	140	140	125	112	118	109
1963	150	128	149	119	128	112	119	109
1964	151	128	134	126	127	111	119	108
1965	..	..	..	..	..	..	119	105

Sources and methods: see pages 33-34.

TABLE 5.6

Dispersion of average earnings between industries

Standard deviation as a percentage of average unweighted earnings

13 industries		
Belgium	*1954*	*1964*
Male wage-earners	14.1	18.1
Male salary-earners	9.5	11.6
France	*1957*	*1964*
Male wage-earners	13.3	12.0
Male salary-earners	10.2	9.0
Western Germany	*1954*	*1964*
Male wage-earners	13.0	10.9
11 industries		
Norway	*1953*	*1964*
Male wage-earners	9.7	12.0
Sweden	*1953*	*1963*
Male wage-earners	13.6	11.8
United Kingdom	*1953*	*1965*
Male wage-earners	10.7	6.5
10 industries		
United Kingdom	*1959*	*1965*
Male salary-earners	6.2	4.6
8 industries		
Netherlands	*1953*	*1964*
Male wage-earners	5.1	6.0
Switzerland	*1953*	*1964*
Male wage-earners	4.3	6.6
Male salary-earners	6.5	6.7
7 industries		
Austria	*1954*	*1964*
Male wage-earners	4.5	3.9
Denmark	*1953*	*1963*
Male wage-earners	4.7	6.5

Sources and methods: see pages 33-34.

It is difficult to trace a connexion between these trends in dispersion and the pay policies pursued in the countries where a pay policy was in operation. Thus in the Scandinavian countries the central negotiators endeavoured to follow a policy of "solidarity", which should have implied a narrowing of the inter-industry dispersion. This narrowing occurred in Sweden but not in Denmark or Norway. In the Netherlands, on the other hand, it might have been expected that the possibilities of greater differentiation opened up by the changes in wage policy in the late 1950s would have created a wider dispersion than in fact occurred. The extent of the dispersion also seems unrelated to wage policy: it is narrow in Denmark and the Netherlands, but no narrower in Sweden or Norway than in western Germany or France and wider than in the United Kingdom.[17]

These comparisons could be illuminated if it were possible to analyse more of the factors influencing dispersion. In this respect, a French analysis of earnings displays some of the forces at work in France:[18]

Mean deviations in average earnings as percentage of mean

(1) Men and women, all occupations, all regions	10.1
(2) Men and women, all occupations, in each region	7.7
(3) Each region, each sex, each occupational group [a]	2.6

[a] The data in these categories are the "rates effectively practised" and so eliminate overtime and much of the effects of drift.

This illustrates how heavily dispersion, in the particular case of France, is influenced by regional differentiation, by sex, and by occupational categories, The implication is that for a man, or a woman, of a given occupational group in a given region there is almost no variation between average pay in different industries.

Demand for labour and inter-industry differentials

The difficulties of identifying causal relationships between pay movements and such economic factors as mobility, productivity, profits and so on, have already been emphasized.

A very thorough study by the OECD investigated the relationships between wage changes and changes in employment, in an attempt to explore the importance of relative wages as an influence on mobility of labour.[19] The study covered several western European countries, the United States and Canada. The statistical analysis proceeded by simple and partial correlations [20] between pay changes and employment changes, with varying time lags, year by year from 1948 to 1961. The results were confined mainly to manufacturing industries. The general tenor of the analysis was to show that wage changes and employment changes were positively correlated, but very weakly. It was also found, (*a*) that the correlation coefficients were larger for broad than for narrow industry groups, suggesting that mobility in response to pay differentials was greater as between major groups (i.e. when manufacturing was divided into

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[17] For a discussion of the influence of drift, as distinct from collective negotiations, on inter-industry differences in wages, see Chapter 3, page 24.

[18] Vacher, "Quelques aspects de la structure des salaires horaires ouvriers", *Etudes statistiques*, supplément trimestriel, January-March 1956.

[19] OECD, "Wages and Labour Mobility", Paris 1965. The report was prepared by an expert committee under the chairmanship of Professor P. de Wolff, Director of the Dutch Central Planning Bureau, and included a very full statistical analysis undertaken by the OECD Secretariat. The report also dealt with the ranking order of industries and exhibited the general stability of rank orders which has been described in the preceding pages.

[20] That is, holding constant the *level* of earnings.

5-25 branches) than between more-narrowly defined ndustries;[21] (b) that there was no substantial improve- nent in the correlation when a long lag — of three or ive years — was taken; (c) there was some tendency for he correlations to be higher in times of high demand or labour; (d) an extremely large deterioration or mprovement of relative pay in a particular industry vas found to be more strongly associated with changes n relative employment than more normal changes. By nd large, the results suggest that changes in pay differen- ials can at the most explain only a small fraction of the hanges in employment, even between broad industry groups. It appears that, as the authors of the OECD eport conclude, "the observed changes in the allocation f labour are often brought about by mechanisms other than changes in the wage structures and the ob- erved changes in the wage structures are often brought bout by forces other than those that allocate labour".[22]

We have not attempted to retrace in detail the path covered by the OECD. But a number of correlations have een calculated for eight western European countries, howing (a) the association between changes in relative arnings and changes in relative employment and (b) that etween the initial level of earnings and changes in employment (Table 5.7). The calculations relate to both manufacturing and non-manufacturing branches (from 12 to 34 branches being covered in the different countries),[23] taking men and women, and wage- and salary-earners, separately. Only the changes between the beginning and end of a period of, in most cases, about a decade are calculated. The coverage of industries and countries as well as the methods of calculation are different from those in the OECD analysis and the period includes more recent years. The major result, however, is similar: the correlations between changes in relative earnings and changes in relative employment are mostly positive but very low; few of the coefficients can be regarded as statistically significant. Again, the conclusion must be that relative changes in earnings cannot be a major factor in determining labour mobility.

The second test — of the correlation between the initial level of earnings and the subsequent changes in employment — also reveals a general absence of association; indeed several of the coefficients are negative.[24]

One further and more detailed empirical investigation has been attempted. For France, statistics have recently been published providing a complete matrix of movements of male workers from and to each branch of activity

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[21] This result was given earlier prominence by W. B. Reddaway, 'Wage flexibility and the demand for labour", *Lloyds Bank Review*, ctober 1959. In Great Britain, in 1951-1956 the correlation improv- d from +0.4 when calculated on 111 industry divisions to +0.9 hen calculated on 14 major sectors.

[22] OECD, *op. cit.* page 17.

[23] Corresponding roughly to the analysis by "broad" industry groups in the OECD analysis.

[24] To the extent that the level of relative earnings in an industry depends on the occupational composition, these correlations must be expected to be weak.

TABLE 5.7

Correlation coefficients: A. Relative changes in earnings and employment (simple correlations)
B. Level of earnings[a] and relative changes in employment (rank correlations)

Country	Period[b]	Worker category	Number of branches	Correlation A (simple correlation)		Correlation B (rank correlation)
				Coefficient	Significance limit (5 %)[c]	Coefficient
Belgium	1954-1964	Male wage-earners	30	— 0.14	0.36	— 0.01
		Male salary-earners	30	0.22	0.36	0.03
		Female wage-earners	30	0.33	0.36	*— 0.36*
		Female salary-earners	30	*0.59*	0.36	— 0.12
Denmark	1955-1963	Male wage-earners	13	0.46	0.55	— 0.26
France	1957-1963	Male wage-earners	29	0.25	0.37	0.01
		Male salary-earners	29	0.36	0.37	— 0.35
		Female wage-earners	27	0.20	0.38	0.32
		Female salary-earners	29	0.35	0.37	— 0.02
Western Germany . .	1957-1963	Male wage-earners	34	*— 0.41*	0.34	0.05
	1953-1963	Male salary-earners	12	*0.65*	0.58	0.10
Netherlands	1958-1962	Male wage-earners	14	— 0.14	0.53	— 0.02
Norway	1953-1964	Male wage-earners	29	0.16	0.38	0.18
Sweden.	1953-1963	Male wage-earners	23	0.22	0.41	*0.43*
United Kingdom . . .	1953-1965	Male wage-earners	19	0.32	0.46	0.28
	1959-1965	Male salary-earners	16	0.15	0.50	0.06

Sources and methods: see pages 33-34.

At the beginning of the period indicated.

[b] The correlation relates to the extreme years of the period.

[c] Value of the correlation coefficient which corresponds to a significance limit of 5 per cent.

TABLE 5.8

France : Inter-industrial movements of active male population between 1959 and 1964

Thousands of persons

Importing industry / Exporting industry	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total listed
1. Petroleum and products	×	—	—	1.2	—	—	—	0.2	2.4	—	0.6	—	—	0.4	—	—	4.8
2. Banking and insurance	—	×	—	—	0.4	—	—	—	—	0.4	4.0	0.6	2.2	2.0	—	—	9.6
3. Electricity and water	—	—	×	—	—	—	1.0	—	—	1.0	1.2	—	—	2.2	—	—	5.4
4. Chemicals and rubber	—	0.8	—	×	—	—	—	3.0	—	1.2	1.6	—	1.6	6.2	1.6	—	16.0
5. Metal-using industries	1.0	—	2.4	9.8	×	3.6	—	17.4	3.8	13.2	10.0	3.4	28.4	33.6	7.0	4.0	137.6
6. Extraction of metallic ores and metallurgy	—	0.4	—	—	11.0	×	—	—	—	—	—	—	—	—	—	4.0	15.4
7. Solid fuels	—	—	1.4	—	2.2	1.0	×	—	2.0	4.0	0.8	2.0	—	2.0	—	—	15.4
8. Transport and communications	2.0	1.4	—	5.6	15.2	4.2	1.4	×	3.6	3.0	14.0	—	7.8	2.4	—	1.0	61.6
9. Building materials and glass	—	—	—	0.4	4.2	—	6.0	—	×	2.0	0.2	2.4	10.6	15.0	2.0	—	42.8
10. Other manufacturing	—	1.0	4.0	1.2	23.0	0.4	—	3.4	2.0	×	4.6	1.0	13.6	16.0	4.6	4.0	78.8
11. Other private services	0.2	3.2	—	8.4	18.8	8.0	4.2	2.8	3.0	3.0	×	4.4	19.6	13.4	2.0	18.8	109.8
12. Food, beverages and tobacco	2.0	2.2	—	1.8	9.0	—	4.0	5.4	3.0	3.0	9.4	×	17.6	9.4	—	—	66.8
13. Trade	1.0	3.8	1.0	4.8	20.0	2.4	—	10.4	6.0	2.8	27.6	12.0	×	13.2	7.4	9.4	121.8
14. Construction	—	0.8	4.4	4.4	34.4	5.0	—	12.4	5.0	21.8	21.0	4.2	27.0	×	2.0	9.8	152.2
15. Textiles and clothing	—	1.0	—	3.2	24.4	—	—	6.0	—	0.4	8.8	1.4	3.2	1.8	×	—	50.2
16. Agriculture	—	1.2	1.0	2.0	18.2	2.0	3.0	22.4	8.0	29.0	16.4	22.6	28.0	40.4	8.0	×	202.2
Total listed	6.2	15.8	14.2	42.8	180.8	26.6	19.6	83.4	38.8	84.8	120.2	54.0	159.6	158.0	34.6	51.0	1 090.4
Relative average earnings in 1961-1962	153.5	129.3	115.0	110.7	104.7	103.7	99.0	97.9	93.5	93.1	88.1	86.3	85.7	80.3	80.2	65.1	

Sources: Migrations: INSEE, "La mobilité professionnelle en France entre 1959 et 1964", *Etudes et Conjoncture*, No. 10, 1966, p. 138. Movements between the above industries and public administration have been excluded as data on earnings of civil servants were not available.

Earnings: Average earnings in each industry for 1961 and 1962 are published in *Etudes statistiques*, No. 2, 1963 and No. 2, 1964. Relative earnings refer to the average percentage for the two years of these data related to earnings in manufacturing. For agriculture, the index relates to the average household earnings of wage-earners in agriculture as percentage of average household earnings of wage-earners in other activities in 1962 as taken from "Les ressources des ménages par catégorie socio-professionnelle", *Etudes et Conjoncture*, No. 7, 1966, p. 109.

between 1959 and 1964. The figures for 16 branches are summarized in Table 5.8, the industries being listed in descending order according to the level of average wage-earnings in the middle of the period of observation. Thus if all movements were from lower-paid to higher-paid industries, all the figures would be found on the left of the diagonal. This is clearly not the case. Nevertheless, if to each migratory group is attributed a change in income equal to the difference between the average wages of 1961-1962 in the industry of origin and that in the industry of destination, the 1.1 million workers (12½ per cent of the 1959 labour force) who moved would have secured in total an average net gain of 6.2 per cent.[25] A similar calculation for the metal-using industries shows that the "immigrants" into that industry increased their earnings on average by 16.0 per cent as compared with earnings in the industry they left. On the other hand, the immigrants into the construction industry suffered a net loss of earnings of 10.2 per cent.

In Table 5.9, the inter-industry movements are related to the number of workers in each industry (in 1959). It is the industries with the highest earnings — those at the top of the table — which have on balance gained most and the industries with the lowest earnings which have on balance lost most; thus electricity and chemicals have each added 12 per cent net to employment, while agriculture has lost 7 per cent net. But it is very clear from this presentation, once again, that there is nothing like a precise correlation between relative earnings and the net change in employment. This is further exhibited by Table 5.10, where rank correlations are calculated for each industry between (*a*) its rank in the hierarchy of average earnings and (*b*) net migration into it from each of the other industries as a proportion of 1959 employment in the industry of origin (this calculation eliminates the influence of the different sizes of the industries of origin and the influence of employment growth in the industry of destination). In every industry a positive correlation appears, but in none does the rank correlation coefficient exceed the 5 per cent significance level, and in only five (of the 16 industries) the 10 per cent significance level. On the whole, the correlations are somewhat higher for the lower-paid industries — suggesting, for example, that the emigrants from agriculture have distributed themselves relatively well in accordance with the opportunities for higher earnings.[26]

TABLE 5.9

France : Rates of departures and arrivals for various industries, between 1959 and 1964

As percentage of employment in 1959

Industry	Departures[a]	Arrivals[b]	Increase
Petroleum and products	14.8	19.1	4.3
Banking and insurance	9.4	15.4	6.0
Electricity and water	7.2	19.0	11.8
Chemicals and rubber	6.9	18.5	11.6
Metal-using industries	12.0	15.7	3.7
Extraction of metallic ores and metallurgy	7.1	12.3	5.2
Solid fuels	10.4	13.3	2.9
Transport and communications	8.6	11.6	3.0
Building materials and glass	21.9	19.8	— 2.1
Other manufacturing	15.7	16.9	1.2
Other private services	13.6	14.9	1.3
Food	19.1	15.5	— 3.6
Trade	13.8	18.1	4.3
Construction	14.9	15.5	0.6
Textiles and clothing	14.8	10.2	— 4.6
Agriculture	9.8	2.5	— 7.3
Total listed	12.4	12.4	—

Source: see Table 5.8.

[a] Men working in each industry in 1959 who in 1964 were working in one of the other industries listed.

[b] Men working in each industry in 1964 who in 1959 were working in one of the other industries listed.

TABLE 5.10

France : Correlation coefficients between the difference in average earnings and the share of employment taken from each of the other industries

Industry	Correlation coefficient
Petroleum and products	0.29
Banking and insurance	0.48
Electricity and water	0.32
Chemicals and rubber	0.19
Metal-using industries	0.39
Extraction of metallic ores and metallurgy	0.32
Solid fuels	0.19
Transport and communications	0.49
Building materials and glass	0.16
Other manufacturing	0.20
Other private services	0.15
Food, beverages and tobacco	0.51
Trade	0.49
Construction	0.04
Textiles and clothing	0.42
Agriculture	0.48

Source: Data taken from Table 5.8.

NOTE.—For significance at the 5 per cent level, the coefficient should be 0.51 or greater and at the 10 per cent level should be 0.44 or greater.

On the other hand, construction — a relatively low-paid industry in which emigrants and immigrants are almost in balance — shows almost no correlation; its largest intake is from agriculture — even worse paid on average — but it clearly draws workers from almost all industries higher up the earnings hierarchy and its emigrants are also widely distributed.

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[25] The same figure is obtained if calculated from average earnings in 1964. The assumption behind this calculation is that the earnings of the average emigrant from industry X to industry Y changes from the average earnings in X to the average earnings in Y. In reality, of course, movements between industries may often represent geographical and occupational movements which are not in accordance with this assumption.

[26] As Table 5.8 shows, the largest number of ex-agricultural workers are found in metal-using. Nevertheless, almost as many are found in the lower-paid trade and construction industries into which movement is easier, perhaps because of their demand for unspecialized labour. Table 14 of the original inquiry also shows that well over half the ex-agricultural workers entered general labouring or building occupations (see Table 5.8).

Many explanations can be offered for the apparent weakness of relative income as a force pulling in, or pushing out, manpower between industries. As the matrix of movements in France, just analysed, reveals, inter-industry movements are the result of a far more complex set of motives than the possibility of a gain in relative earnings. For example, cases could be found where the widespread modernization of an industry — especially an industry not benefiting greatly from expansion of relative demand — could result in great labour-saving accompanied by a large increase in relative earnings.[27] Moreover, the statistics do not reveal how much movement there is between plants within the same branch of industry — which in most countries probably accounts for the largest proportion of labour turnover.

Still another qualification may be mentioned. The statistical results are not in themselves inconsistent with the hypothesis that mobility in response to relative pay is so perfect and so rapid as to escape statistical observation. The stability of the pay structure *might* be the result of almost instantaneous adjustment both of labour supply and of pay variations. However, the most plausible, if not statistically verifiable, conclusion seems to be that drawn by the OECD — that the major factors behind relative pay changes are independent of the major forces governing the movements of labour.[28]

Relative earnings, productivity and profits

Relationships between changes in productivity and relative earnings have also been studied with somewhat negative results. The OECD report already cited refers to several such investigations and concludes that "the data examined by us indicate no significant tendency for above-average productivity gains to be associated with more rapid earnings increase, although due weight must be given to the possibility that the apparent absence of any relationship may be accounted for by the very great difficulties of measuring changes in productivity adequately".[29] An attempt by the ECE Secretariat to find correlations between earnings changes and productivity in western Germany and France produced extremely low correlations.

On the other hand, there is evidence for the view that changes in relative earnings and in relative profits, by industry, are positively associated. The OECD report, again, shows clear correlations in the United States and some evidence of correlation in France and the United Kingdom.[30]

Earnings in agriculture

From most of the analysis of relative earnings so far, earnings in agriculture have been excluded for lack of comparable data (treatment of remuneration in kind, of earnings of farmers' families, etc.). A thorough study of agricultural earnings in relation to those in other sectors is not possible within the compass of the present study. However, figures of the earnings of male wage-earners in agriculture, expressed as proportions of male wage-earnings in manufacturing, are presented for eight countries in Table 5.11. So far as these data go — and they are subject to many qualifications — they show remarkable differences in the relative level of agricultural earnings: from just over half manufacturing wages in Italy and Switzerland to nearly 90 per cent in the Netherlands.

TABLE 5.11

Earnings of male wage-earners in agriculture

As percentage of corresponding earnings in manufacturing

Country	1938	1948	1954	1964
Denmark	44	65	60	63
Western Germany	64	66	67	75
Italy [a]	43	58	60	57
Netherlands	61	83	88	88
Norway	42	76	71	68
Sweden	50	70	68	73 [b]
Switzerland	42	47	47	55
United Kingdom	48	72	69	66

Sources: Data shown in Table 75 of the *Economic Survey for Europe in 1955* have been brought up to date by using national sources, as well as the FAO *Production Yearbook, 1965* and the ILO *Yearbook of International Statistics 1965.*

NOTE. — For Denmark, western Germany and Switzerland data refer to cash pay only.

[a] Wage rates.

1963.

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[27] In the United Kingdom, out of 132 industries the tinplate industry showed almost the biggest fall in relative employment and the biggest rise in earnings during the ten years 1948 to 1959 (the result of the rapid introduction of new processes and the superseding of the old hand-mills during the period of observation). E. H. Phelps Brown and M. H. Browne, "Earnings in industries of the United Kingdom 1948-1959", *Economic Journal*, September 1962.

[28] Many studies have been made of the factors which do govern labour mobility. See particularly a series of monographs in OECD, International Joint Seminar on geographical and occupational mobility of manpower; International Seminars 1963-3, *Final Report* and *Supplement to the Final Report*. One author in the series is led to conclude: "The investigations have produced curious results — an apparent preference for low wages, limited opportunity, insecurity, unemployment . . . The truth seems to be that, though man sometimes moves in his role of economic man, more generally it is in his role of husband or father . . . The possibility of movement will be greatest to those areas where available jobs are increasing and new houses are being built" (G. Routh, in OECD, *op. cit.*, pp. 142-143).

[29] OECD, "Wages and Labour Mobility 1965", pp. 111-112. See also Chapter 3 of the present study, pages 24 and 26, where an effort to relate wage drift with productivity changes, by industry, in western Germany and the United Kingdom gave negative results.

[30] OECD, "Wages and Labour Mobility 1965", pp. 105-111. The report points out that relative changes in profits and in employment are also positively correlated. With employment held constant, the correlation between profits and earnings remains significant in the United States and France, but is much weakened in the United Kingdom. "There is some evidence in favour of, and some evidence against, the hypothesis that changes in earnings are more closely related to profits trends than to employment requirements." (P. 110.) For other investigations in the United States, see Chapter 3 of the present study.

It is possibly more significant that, except in western Germany, relative earnings in agriculture improved greatly between the pre-war and immediate postwar years. During the postwar period, however, experience has differed. From 1954 to 1964, relative agricultural earnings rose markedly in western Germany and Switzerland, and increased somewhat in Sweden and Denmark. But they fell slightly in Italy, Norway and the United Kingdom, and remained unchanged in the Netherlands.

5.2. RELATIVE PAY BY OCCUPATIONAL GROUPS

It is evident that in western Europe differences in pay depending on occupation are much wider than the differences depending on the industry of employment; even within the major occupational categories — for example, manual workers — there is a wide dispersion. The occupational pay hierarchy carries a heavy weight of tradition — often owing much to influences which are less important today than they were when the pattern was established. Yet it is important — if social harmony is to be preserved — that the occupational pay structure should be one which is both generally acceptable and at the same time one which will be receptive to the play of economic and social forces, and in particular will allow for the adaptation of manpower supply to the demand changes inherent in the structural development of the economy and society. The latter is not an easy requirement to meet, because mobility between occupations, at many levels, is necessarily restricted; the adjustment of supply to changing demand between occupations can be a long process — very much longer than inter-industry adjustment.

It is proposed in this section to describe some of the factors determining the main tendencies in relative pay by occupational groups and to consider the various national policies that have developed.

The occupational pay pattern is brought about by a variety of factors operating simultaneously. It is often thought to be irrational and based on no clear principles — perhaps because of the multiplicity of determinants, sometimes contradictory in their effect, and because of the complex of traditions which hinder the play of the more elementary regulatory mechanisms.

It must also be said that lack of precise information (a somewhat monotonous refrain in this study) is a serious obstacle both to understanding what the trends are and to the development of improvements in the occupational pay structures. In spite of the importance of differences between occupational pay levels, statistics in this field have on the whole developed less than those relating to pay by industry.[31] Moreover, it is often the case that pay statistics can be found relating to normal rates of pay for specific occupations but not to actual earnings. For non-manual workers, in particular, a traditional reticence — as well as the wide diversity of pay — has impeded efforts to collect pay information. At the same time, statistics about the distribution of employment between occupational groups tend to be found only in censuses of population; the long intervals between censuses, and the normal delays in analysis and publication, make it impossible to assess the current trends. These gaps in knowledge not only obstruct economic and social analysis, and the formulation of general policy; they also increase the difficulties of managements who wish to improve their pay structures,[32] of workers who wish to take advantage of the opportunities open to them of improvement, of young people choosing employment and of those who advise them. One necessary condition for the effectiveness of an "active labour market policy" is a supply of detailed information about these matters to all concerned. From several points of view, more information about occupational pay and about trends in occupational distribution is at least as important as information about wages and salaries as components of production costs in different industries.

The analysis of such information as is available, bearing on the factors underlying the occupational pay structure, will proceed by examining, first, some relevant changes in labour markets, secondly, the characteristics of different occupations, and thirdly, factors concerned with the characteristics of the individual worker (including sex and age). The results, in terms of actual occupational pay structures, are summarized at the end.

Labour markets and inter-occupational mobility

It might be expected that long-term variations in supply and demand by occupational categories, engendered by changes in social and economic structures, would substantially modify the occupational pay hierarchy. The influence of these variations in supply and demand is very difficult to uncover, since so many other factors are at work. Moreover, there is at least some general tendency towards equilibrium; thus the long-term increase in the supply of educated people, resulting from the expansion of the educational system, is not entirely independent of the increasing demand for people with certain educational qualifications. But mobility between occupations is obviously much more restricted than inter-industrial and geographical mobility, and, moreover, becomes increasingly difficult in ascending the hierarchy. Adaptation of supply to demand is necessarily a slow process for some occupations, depending almost wholly on the rate of inflow of young entrants with appropriate qualifications. Thus at least temporary disequilibria must arise and could be expected to bring about larger changes in occupational pay structures than the rather small changes observed in pay structures by industry.[33]

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[31] Indeed it is quite common to find that statistics about occupational pay levels which were often, formerly, the easiest to obtain — at least for manual workers — have been to a great extent superseded by statistics about industry averages. In part this may be the result of the greater significance of industry statistics for broad economic, as opposed to social, analysis, in part to the diminishing significance of craft unions and craft agreements. It is encouraging to note a certain reversal of the tendency. Thus the British Ministry of Labour has now begun to collect detailed statistics of manual and non-manual earnings by occupation within individual industries. In France, too, there have for a long time been regular estimates of numbers and average pay by occupational groups which will be drawn upon in the following pages.

[32] In particular, there has developed a considerable demand from managements for information about pay levels in administrative and technical posts; various efforts have been made for this purpose towards the standardization of job descriptions.

Some of these unbalances can, of course, be corrected relatively quickly by various methods of adult training, including an acceleration of training on the job. But the limits on inter-occupational mobility brought about in these ways tend to be rather narrow; their enlargement is indeed a main feature of active labour market policies.

Moreover, even for a given occupation, pay levels vary widely, both between enterprises and geographically.[34] Such differences may often exceed, for example, the difference between average pay for semi-skilled and for skilled workers, and the geographical differentials are often institutionalized in collective agreements and in public service pay scales.

Proportional changes in occupational structures[35] in France, Italy and the United States (including some projections), and data for 1961 for the United Kingdom, are shown in Table 5.12. In the first three countries, the proportion in managerial and professional grades increased markedly between the early nineteen-fifties and early nineteen-sixties. Manual workers (including foremen, etc.) show a small increase in France, while in the United States the share decreased by almost 10 per cent. In the United States and the United Kingdom in the early nineteen-sixties, manual workers, even including the 8 per cent in agriculture, were less than 60 per cent of the active population against about 70 per cent in France and (probably) in Italy.

The projections quoted imply a continuation of recent trends for France and the United States, although for Italy a very rapid acceleration of these trends is expected.[36]

The study of inter-industry mobility in France, already quoted, also provides information about the extent of inter-occupational movements of individuals between 1959 and 1964.[37] The following examples of promotions may be quoted (for men):

2.5 per cent of the men who were school-teachers in 1959 became professors by 1964;[38]

TABLE 5.12

Changes in occupational structure in France, Italy, the United Kingdom and the United States

Percentages

France (Total occupied population)	*1954*	*1962*	*1978* (projections)
Managerial	1.6	2.0	3.0
Scientific and technical	2.4	3.3	6.0
Administrative	7.9	9.8	12.9
Commercial	8.8	8.6	8.3
Health service	1.3	1.8	3.0
Teaching	1.9	2.7	4.0
Manual workers	37.0	39.3	41.2
of which: Qualified	..	18.3	20.7
Agricultural	27.3	20.5	10.2
Service workers and miscellaneous	11.8	12.0	11.4

Italy (Total active population)	*1951*	*1959*	*1975* (projections)
Managerial and professional			
Higher	2.4	2.9	5.9
Lower	6.6	7.4	15.8
Technicians	2.2	3.2	9.9
Skilled manual and non-manual	22.1	25.6	48.1
Unskilled manual and non-manual	66.7	60.9	20.3

United Kingdom (England and Wales,total gainfully employed population)	*1961*
Professional	2.9
Employers and managers	12.7
Clerical workers	27.0
Foremen and supervisors	2.4
Skilled workers	24.6
Semi-skilled workers	20.1
Unskilled workers	8.1
Agricultural workers	1.8

United States (Total active population)	*1950*	*1960*	*1970* (projections)
Professional, technical	8.6	11.2	13.3
Managerial and administrative	8.7	10.6	10.7
Clerical and related	12.3	14.7	15.9
Sales	7.0	6.6	6.7
Craftsmen, foremen	14.1	12.8	12.8
Workers	20.4	18.0	16.9
Service workers	10.5	12.5	13.8
Unskilled industrial workers	6.6	5.5	4.6
Agricultural	11.8	8.1	5.3

Sources and methods: France: *Cinquième Plan de développement économique et social*, Tome II, Table II; Italy : SVIMEZ, *Mutamenti della struttura professionale e ruolo della scuola. Previsioni per il prossimo quindicennio*, Rome 1961; United Kingdom: *1961 Census of Population, England and Wales*, comparable data for earlier years not available; United States: Census data and projections (quoted in *OECD International Seminars 1963-3*).

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[33] Statistics of job vacancies in relation to unemployment, according to occupational groups, almost invariably exhibit quite long-lasting disequilibria. Some recent data are summarized in the *Economic Survey of Europe in 1964*, Chapter II, pp. 28-30.

[34] An inquiry by the *Confédération française démocratique du travail* into earnings in the French metallurgical industries showed skilled workers in the Paris region to be earning on average about 50 per cent more than similar workers in the region of lowest pay. "Résultats de l'enquête nationale salaires", February 1965, supplement of *Bulletin du Militant*, September 1965.

[35] Differences in classification render it difficult to make meaningful comparisons of these proportions between countries.

[36] The sources of these projections are stated in Table 5.12.

[37] INSEE, « La mobilité professionnelle en France entre 1959 et 1964 », *Etudes et Conjoncture*, 1966, No. 10, p. 144.

[38] I.e. in secondary schools or universities.

2.7 per cent of technicians became engineers and 3.3 per cent "cadres supérieurs";

8.2 per cent of "cadres moyens" became "cadres supérieurs";

6.9 per cent of office workers became "cadres moyens";

3.1 per cent of skilled workers became foremen or supervisors;

9.3 per cent of semi-skilled workers became skilled workers and 2 per cent foremen, etc;

7.8 per cent of unskilled workers (manœuvres) became skilled and 14.2 per cent semi-skilled.

The significance of these promotion rates varies, of course, from case to case. It is normal for some senior posts to be filled by internal promotion (e.g. general management, foremen) while higher posts demanding special educational qualifications (e.g. engineers) are most often filled by direct intake from the schools, and others (e.g. some skilled manual crafts) almost exclusively by apprenticeship. The occupations most generally regarded as serious bottlenecks in western European societies are, in fact, the highly qualified professions, and intermediate occupations such as technicians and certain groups of skilled manual workers. For most of these jobs, in present conditions, fresh intake comes mainly from young entrants and not from internal promotion. Yet even for some of these occupations, it may well be felt that provision for the education and training of adult workers could be greatly extended.

There are obvious cases where low relative pay is undoubtedly a factor impeding recruitment, mainly through its effect on career prospects (for example, in many western European countries, hospital staff and teachers). There are others — notably engineers and scientific research workers — for whom there is, in a sense, an international market which exercises its influence both on national salary scales and on international mobility.

Occupational characteristics

Opposed to the concept of a pay structure determined by the market is, as has been pointed out above, the principle of "equal pay for equal work". To apply the latter principle requires a measure of the content of different types of work, to which pay relatives can be attached. The method of doing this is what is known as "job evaluation", of which the purpose is to bring about a balance in relative pay such that each worker would prefer to retain his existing job rather than move to another job of equal qualifications and holds that his own qualifications are equitably remunerated.[39]

In a number of countries efforts have been made to establish centrally some general principles to which, it is hoped, the relative pay structures in individual industries and enterprises will conform. These principles are put forward as a guide for collective bargaining and for those concerned with pay determination in the enterprise. They vary from quite elaborate standard systems of job evaluation, as in the Netherlands, to a more modest attempt, as in France, to provide a national classification of occupational categories in the hope of clarifying pay negotiations.

It is probably in the *Netherlands* that such systems have been most fully developed and — at least until recently — most successful. As an integral part of the centralized system of pay determination established at the end of the war (involving the need for government approval of every pay settlement), an expert committee set up a classification of occupations based on the use of ten job criteria.[40] (For several years, the weights attached to each criterion were regarded as provisional only.) The resulting ranking of jobs served as a guide to the Board of State Mediators whose function was to examine every proposed pay agreement on behalf of the Government.[41] The differentials to be attached to the job ranking were determined by the Board. Generally speaking, the procedure was (*a*) to take the "social minimum wage" as corresponding to the least qualified job; (*b*) to select a mid-point wage level in the engineering industry; (*c*) to attach pay relatives to the other occupations in the hierarchy.[42] The collective agreement would normally fix for each relevant occupational category a minimum for each individual, and a range within which the average pay for the category should fall. Within these constraints, each enterprise could adopt its own internal system of job evaluation (by agreement within the enterprise committee and in consultation with the Board of Mediators). Where systems of payment-by-results applied, they could be designed to yield increments of 25 to 30 per cent above the corresponding time rates. Regional differences could also be introduced (based on differences in living costs) but only within rather narrow limits — a range of about 10 per cent at most. Until 1954, there was no provision for differentiation between enterprises — only the principle of equal pay for equal work.[43]

The progressive loosening of the original rigidity of the Dutch system of pay control has been described in Chapter 4, and the application of a centrally-determined pay structure has given way to much greater flexibility and variation between enterprises. Indeed, ways were soon found of escaping from the constraints. For example, the standard system could not be rigidly applied to piece-workers, and this may be one reason why the proportion of piece-workers tended to increase in the early 1950s.[44] Another loophole has always been the possibility of "contrived promotion" or "over-grading" of workers to permit higher pay.[45]

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[39] International Labour Office, "Job evaluation", *Studies and Reports*, New Series No. 56, 1960.

[40] See Bert Zoeteweij, "National wage policy: the experience of the Netherlands", *International Labour Review*, February 1955. A separate system was established for manual and non-manual occupations.

[41] See Chapter 4, p. 2.

[42] The conversion into monetary pay levels of the number of "points" in the hierarchy established by job evaluation could be varied by the Board; the slope and curvature of the "wage line" was part of the decisions embodied in wage policy.

[43] Occasionally some enterprises in financial difficulties were provisionally allowed to pay lower rates.

[44] The proportion of piece-workers rose from 45 to 54 per cent between 1951 and 1954, OEEC, *The Problem of Rising Prices* (1960).

In *France*, the standard system of job classification, although much simpler than the Dutch, and with more modest aims, was established immediately after the war. The system was drawn up by a commission of employers and unions under the chairmanship of an official, M. Parodi, from whom the classification takes its name. It was originally intended — in a period when it was hoped to rationalize the whole system of pay determination [46] — as a guide not only to classification of workers but also to the actual pay scales. The latter aim has long since been modified, but the Parodi classification still remains the standard terminology of occupational description,[47] and still exercises an important influence on the general pattern of occupational pay structures.

For each occupational group, a point in the hierarchy is established: taking an unskilled labourer as 100, a "specialized" labourer is put at 115, a "specialized" worker at 130, a "qualified" worker at 155 and a highly qualified worker at 185 (with sub-divisions in some categories). The designation "qualified" worker implies a certain degree of formal training ("certificat d'aptitude professionnelle" or "brevet professionnel"), while other categories are designated chiefly according to the function performed. Regional differentials (quite wide ones, probably wider than were justified by differences in living costs) were also provided.[48] For workers on piece-rates, it is provided that the pay corresponding to the "norms" should be 10-15 per cent above the corresponding pay for time-workers.

A similar scale was established for clerical, lower administrative, supervisory and technical occupations [49] (still taking an ordinary labourer as 100). For engineers and other higher administrative and managerial occupations, it was impracticable to establish a standard nomenclature. But "typical positions" were established. Thus the new entrant was classified on the scale at 185 to 330, position II (without supervisory responsibility) at 230 to 393, position III (supervisory posts on two levels) at 400 or 600; the scale for "directors of establishments" could rise as high as 1200.

In 1948, the pay scales for public officials were also reorganized, on a separate scale, with a classification covering about 200 types of job and in 4 categories based as much on educational qualifications as on the function performed. (No effective link was established with the Parodi classification.)

With the restoration of free bargaining in 1950, the Parodi classification continued for a time to govern the basic conventional rates (and related premia) for the majority of wage- and salary-earners. The system has never been radically changed, in spite of certain criticisms, but it has lost much of its practical significance. Thus even where the system of classification is retained, the classification of an individual worker is the responsibility of the enterprise and depends either on the management or on the bargaining power of the individual. Moreover, technical change has led to the introduction of new functions and their classification may have introduced a certain disorder into the system. Mechanization has often reduced the qualifications required by certain workers with specialized manual skills, yet the workers concerned may retain their position in the hierarchy. On the other hand, some functions requiring little specialization but a high general capacity have become very important because of the high responsibility attached to the operation of expensive equipment. Workers in the intermediate category sometimes got classified as "skilled", sometimes as "specialized".

There is clear evidence that the criteria of the Parodi classification are less and less respected. Thus data collected by the Union of Mining and Metallurgical Industries show a shift in the composition of the labour force, part of which must certainly represent an increasing element of "over-grading", accompanied by a widening in pay dispersion:

Category (Parodi classification)		*Employment (percentages)*		*Pay structure (Ordinary labourer = 100)*	
		Jan. 1957	*Jan. 1965*	*Jan. 1957*	*Jan. 1965*
Labourer	1	1.6	1.0	100	100
Labourer	2	9.6	6.3	110.4	111.4
Specialized worker	1	12.7	11.1	119.0	120.7
Specialized worker	2	31.9	35.2	131.5	133.7
Skilled worker	1	20.6	20.0	143.0	144.6
Skilled worker	2	17.0	17.6	172.3	178.6
Skilled worker	3	6.6	8.8	172.3	178.6

The disparities between the provisions of collective agreements on the one hand, and the actual pay structure on the other, and the consequent diversity of pay structures between enterprises, are continually emphasized by the unions.[50]

No provision is made for regular revision of the Parodi classification, which was never accompanied by any system for continuous job evaluation (corresponding to that in the Netherlands). Consequently, the classification has now become out of date. But the distortions which have been introduced — in most cases to the advantage of the workers concerned — would now represent a

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[45] One study of the constructional engineering industry showed remarkable disparities between enterprises as regards the proportion of "skilled workers" in the labour force and large variations in the training and experience of individuals classed as "skilled", OECD, *The training of qualified workers*, 1965.

[46] See Chapter 4, p. 22. It will be recalled that until 1950 new collective agreements required Government approval.

[47] The Parodi classification is that used in the statistical analysis of numbers and pay by occupational categories (as for example in Tables 5.12, 5.13, 5.14).

[48] The regional differentials in the legal minimum wage have been greatly narrowed. But geographical disparities in actual earnings remain very wide.

[49] For example (taking an ordinary labourer as 100):

Administrative and clerical		*Technicians*	
Clerk	126	Draughtsman (2nd grade)	290
Shorthand typist (2nd grade)	147		
Shorthand typist, correspondence	158	*Supervisors*	
Secretary	185	Team supervisor, category A	209
Bookkeeper (2nd grade)	212	Foreman, category B	271
Buyer	225	Workshop supervisor, category C	340

[50] See Chapter 4, p. 22.

very serious obstacle to any attempt to revise it. In any case, so long as effective pay settlement continues to take place at the level of the individual enterprise, it would be difficult to reverse the trend towards the "individualizing" of pay.

In *Austria*, a standard occupational classification plays a rather similar role to that planned in France. The system defines various occupational groups and attaches great importance to basic education and training, especially to the acquisition of official diplomas and qualifications.[51]

Manual workers are divided into six grades, based — for the three superior grades — on education in a technical school, on the characteristics of the work and the practical experience acquired. These classifications are used in collective agreements for the fixing of minimum pay rates.[52] A similar formalized system exists for supervisory staff and non-manual workers. Movement from one grade to the next normally depends on passing a professional examination.

In *Sweden*, also, a standard relative pay structure for manual workers has been established for application in collective agreements. More than 180 types of job have been defined and classified, based on training and experience, age and seniority, with differentiation also by regions (within a range of about 20 per cent).

The principles of the Swedish system are less rigorous, both in concept and application, than those in the Dutch system. Thus in spite of the policy of "solidarity", and the refusal to accept "inability to pay" as a justification for low wages in particular industries, the Swedish unions are prepared to accept a certain differentiation in particular circumstance.[53] But union policy is to keep these derogations from the principle of "equal pay for equal work" within fairly narrow limits.

"... the solidaristic wage policy does not aim at giving all LO members the same wage. Instead the goal is one of creating reasonable wage differentials... a group whose wage position lies below the industrial average cannot, without further study be designated as a low wage group. By analogy it can also be stated that a group which lies above the industrial average cannot for that reason alone be definitely labelled a high wage group. A contracting sector with a wage level of 95 should not be looked upon as a low wage sector for this reason alone. On the other hand it is probably correct to assume that a contracting sector with a relative wage level as low as 80-85, and below, can be classified as low. The magnitude of this difference from the average can be said to be too large even when consideration relating to the nature of the job has been taken into account."[54]

Efforts have been made recently in Sweden to establish a similar system of classification for non-manual workers as a guide to relativities in collective agreements.

Efforts on the national level to rationalize relative occupational pay structures through collective bargaining — like efforts to change the pay relatives between industries — may well be frustrated by drift at the enterprise level.[55] Because of absence of information about occupational pay rates and earnings, this is generally difficult to establish. But an analysis for *Denmark* brings out the point. There, unions are organized to a great extent on a "craft" basis; the unions representing the unskilled and semi-skilled workers have been able to secure in collective agreements a series of relative improvements in accordance with the principle of solidarity accepted by unions generally (largely by agreements providing equal absolute increases for all skill grades). Yet the skilled workers have been able to regain through drift the relative advantages lost in the collective conventions [56] (see text table below).

Wage differentials and wage drift in Denmark, for male wage-earners

(Percentages)

Worker category	*Average earning, 1948 (lower category = 100)*	*Increase from 1948-1958*		*Increase from 1959-1964*		*Total increase 1948-1964*
		nego-tiated	drift	nego-tiated	drift	
Skilled,[a] piece . . .	156	40	29	19	37	216
Unskilled,[a] piece . . .	143	44	20	26	27	207
Skilled,[a] time . . .	136	43	30	22	32	217
Skilled,[b] piece . . .	135	46	22	23	35	222
Unskilled,[b] piece . . .	125	48	16	30	24	203
Skilled,[b] time . . .	113	56	14	27	28	217
Unskilled,[a] time . . .	109	57	14	32	20	214
Unskilled [b] time . . .	*100*	61	3	37	13	197

Sources: 1948 to 1958: OEEC, *The Problem of Rising Prices*, 1959, 1960, and 1964; *Statistik Årbog 1960 and 1966, Inflationens Årsager.*

[a] Copenhagen.

[b] Province.

The problem of job evaluation

The problem of job evaluation is that of knowing what importance to give to each of the many criteria which can be used to assess a particular type of work. There is an inevitable risk that the arbitrary criteria underlying the traditional pay structures will simply be replaced by others equally arbitrary. Moreover, the evaluation must not only provide a rank ordering of jobs, which may be comparatively simple, but must also determine the quantitative pay relationships, which is more difficult. Nevertheless, experience suggests that in the result differences between different methods are less significant than might be expected. Comparisons show great similarity in the results arrived at by different weighting scales.[57]

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[51] See *Labour Law and Practice in Austria*, Bureau of Labour Statistics, Report No. 241, September 1963.

[52] E.g. in the metal-using industries, the scale runs from 100 for the ordinary labourer to 142 for the top grade of manual worker. Piece-rates are generally supposed to yield a 20 per cent premium over time rates

[53] See Chapter 4, p. 10.

[54] I. Ohlsson, "Tuåårsavtalet facit — låglönegrupper fram", translated by K. O. Faxén, in "Incomes policy in Sweden: Problems and development", *British Journal of Industrial Relations*, November 1964.

[55] See Chapter 3, p. 24, for an analysis of the effect of drift on relative pay by industries.

[56] Limitations on entry into skilled trades, through apprenticeship or other restrictions, were particularly marked in Denmark in the 1950s and helped to maintain this bargaining position (although the system of formal apprenticeship is now rapidly diminishing in importance).

It is, of course, true that the criteria of evaluation may well reflect rather faithfully the lineaments of the existing pay structure (apart from personal factors). For example, a study made by the Coal and Steel Community in several west German steel plants showed a close correlation between the pay structures before and after job evaluation systems had been introduced.[58] The social valuations attached to particular functions may very well be incorporated in the assessment. The following comparison between the standardized system established in the Netherlands and a scheme proposed for eastern Germany is instructive; it will be noticed that the two systems differ chiefly in that "job conditions" (including physical effort) are given a much higher weight in the east German system, while factors related to knowledge and independence are regarded as much more important in the Netherlands.

Factors and weights in job evaluation in the Netherlands and eastern Germany

Netherlands

Factor	*Weight*	
Knowledge	19.6	51.8
Independence	20.5	
Dexterity	7.8	
Adaptability to material and equipment	3.9	
Authority exercised	6.8	17.0
Contact with others	6.8	
Articulateness	3.4	
Risk of causing damage		15.6
Job conditions		15.6
		100.0

Eastern Germany

Knowledge and experience		33.3
Responsibility for others	8.9	17.8
Mental effort	8.9	
Responsibility for equipment		8.9
Physical effort		8.9
Job conditions		31.1
		100.0

Source: Job Evaluation, ILO, *op. cit.*

NOTE. — For the Netherlands, the system refers to the "standardized method", established by the Netherlands National Standards Commission, while that for eastern Germany refers to one of the suggested schemes.

Job evaluation schemes may be drawn up on a perfectly comprehensive basis, for application to any industry or enterprise; or they may be devised to suit the particular conditions of a single firm. In the latter case, market considerations may play a larger part since the choice and weighting of factors and the slope of the pay pyramid come within the discretion of the enterprise.

Supporters of job evaluation attribute to it these advantages: it replaces the anarchy of existing pay scales by a more or less logical structure; new entrants can be more easily placed in the scale; it facilitates the equitable classification of new jobs constantly created by the process of technical change; the impersonal nature of the criteria facilitates settlement of disputes; the devising and application of a system provides information of great value for determining promotions; it encourages better allocation of labour by reducing the number of cases where workers' qualifications are not being fully used.

On the other hand, the system involves a cost, especially since it must be frequently brought up to date; its objectivity is difficult to reconcile with more personal assessments of individuals (based on merit, seniority or even alternative opportunities) which cannot be ignored, and with various forms of payments by results. But the major criticism is that, in spite of the appearance of objectivity, such systems depend on a choice and weighting of factors which must be arbitrary.[59] The ILO study already cited concludes: "All that can be expected to emerge from the process is a well-considered and honest, but basically subjective, evaluation of jobs."

Employers may be either favourable or indifferent to a system of job evaluation. Some are naturally impressed by the practical difficulties and also by the risk of initiating such a system when competitors are not subject to the same constraints. Yet few employers would be prepared to submit to a completely uniform system.

Although unions are universally opposed to the extensive individualizing of pay, their attitudes towards job evaluation tend to be empirical. Their criticisms bear on the difficulties of reconciling job evaluation systems with the procedures of collective bargaining, and with the fact that often enough unions are not associated with the establishment of the job evaluation scales.[60]

Among union groups favouring such schemes is the Italian CISL, which takes the view that the method encourages the establishment of a more equitable and rational pay structure, eliminates discrimination between the sexes, and reduces conflicts between workers. (The Italian UIL is less favourable.) In France, for the metallurgical industries, the FO and CFDT syndicates accept the principle. The more left-wing CGIL in Italy and the

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[57] See Léopold Dor, "Salaires, aptitudes et rendement", *Bulletin de recherches économiques et sociales*, Université catholique de Louvain, February 1952. The author compared 17 jobs, by 12 different methods of evaluation, and found very similar results.

[58] *Job evaluation*, ILO, *op. cit.*, p. 95.

[59] A rather special concept of job evaluation has been developed by Dr. Elliott Jacques and first applied in the Glacier Metal Company in the United Kingdom. The basic principle is that relative pay in a particular job should be determined mainly according to the maximum length of time for which the job-holder, on a single task, can operate on his own discretion and without supervision. One of the justifications advanced for this system is that its simplicity renders it acceptable to workers and is found generally to accord with their own views about the relative "worth" of different jobs. See, among several publications by the same author, Elliott Jacques, *Equitable Payment*, 1961, and *Time-span Handbook*, London 1964.

[60] In the Netherlands, the enterprise committees normally take part in the process of job evaluation; in many countries, of course, unions and shop stewards participate in the operation of the systems in individual enterprises.

CGT in France have not expressed an opinion on the general principle.[61] In the Netherlands, the major union centre, the NVV, has throughout supported the experiment referred to above. Job evaluation is widely used by the Swedish LO.

Personal factors in pay

Three influences on relative pay can be described under this heading: the effect of payment by results — related to workers' production performance; and the relationship of relative pay to age and to sex.

Payment by results can take several forms: piece-rates according to individual performance, premiums based on the performance of the workshop or a smaller group, or on that of the workers in a whole enterprise. Individual piece-rates are for obvious reasons not applicable to all jobs, e.g. where high quality of workmanship is required, or where the job is not directly linked with a specific output or where the speed of work is determined wholly by the machine. Generally speaking, piece-rates are regarded as applicable where the work is repetitive, without requiring a high degree of craftsmanship and where the rhythm is within the individual's control. But — as is shown by the very varying importance of payment by results in different countries, for which figures are given below — there is a wide range of jobs where piece-rates are regarded as appropriate in some countries or enterprises but not in others.

Where individual piece-rates apply, it is generally regarded as equitable that the piece-worker of average ability should earn more than a corresponding worker on time rates. This differential may well have begun as an inducement to workers to accept piece-rates at a time when they were generally opposed to their wider use. Thus it is common in collective agreements to provide that the piece-rates — most of which must necessarily be fixed on the spot — should be so constructed that a worker of average ability is able to earn at least 10 per cent more than he would on time-rates.[62] In practice, of course, piece-rate earnings may greatly exceed these minima. The effect on wage distribution of payment by results is fairly complex. It tends to reduce the difference between the skilled and the semi-skilled men, since the former are less frequently on payments by results than the latter. Thus effective earnings of semi-skilled workers on piece-rates may exceed those of skilled time-workers.[63] Moreover, payment by results, which is a potent factor in wage drift as "norms" get revised, can greatly affect inter-industry pay differences since the proportion paid by results varies greatly between industries.[64] It also accentuates the difference between men's and women's earnings, since women are less often paid by results. In all these ways, payment by results can disturb pay relativities.

Rough estimates of the proportions of workers paid by results in different countries are as follows:

	Percentage
Denmark (1959)	40
France (1946)	26
Western Germany (1957)	26
of which :	
Mines	31
Metallurgy	37
Other manufacturing	23
Construction	4
Netherlands (1955)	54
Norway (1959-1964)	51 [a]
Sweden	60
United Kingdom [b] (1961)	41

NOTE. — These figures, drawn from various sources, may not always include all systems of payment by results. Most of the percentages relate to manufacturing industry only.

[a] Individual result system.

[b] For figures by industry, see Table 3.8.

The high proportions in the Scandinavian countries, and also in the Netherlands, are long-standing.[65] There are, in fact, certain swings of fashion from time to time in favour of, or against, payment by results among managements and experts in industrial relations. At present it is probably true to say that authoritative opinion has been for some time, and still is, turning against payment by results, and especially against individual piece-rates. One reason may be that, under modern productive methods, output becomes less dependent on individual effort. Another reason may be that the need for constant readjustment of piece-rates with technical change not only adds greatly to the work of management and workers' representatives but also affords manifold opportunities for wage drift and a potent source of industrial conflict. Moreover, it renders it increasingly difficult for managements and unions to maintain a reasonable pay structure. Unless ways can be found of standardizing and rationalizing the methods of rate-fixing, it seems unlikely that the individual piece-rate system will spread greatly. In several countries, including Norway and Sweden, there is a disposition to reduce the amount of piece-rate working. One obvious difficulty is that this change could be accomplished only by a heavy fall in the earnings of piece-workers or by a corresponding rise in those of time-workers; there are too many marginal cases where the existing differential could not be justified if all concerned were on time-rates. There may be more

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[61] *Job evaluation*, ILO, *op. cit.*

[62] In the United Kingdom, for example, this minimum proportion varies from 15 to 25 per cent as between collective agreements for different industries.

[63] This appears from the statistics for Denmark in the text table on page 21 above. The same appears from statistics for the United Kingdom engineering industry: in January 1966, semi-skilled men on piece-work were earning slightly more per hour (excluding overtime) than skilled time-workers. Skilled piece-workers, however, were earning 10 per cent more than skilled time-workers, and semi-skilled piece workers 20 per cent more than semi-skilled time workers. (See Ministry of Labour Statistics on Incomes, Prices, Employment and Production, June 1966, Table B.12.)

[64] The importance of the frequent adjustments of piece-rates as a factor in drift, in several countries, was emphasized in Chapter 3, especially page 27. The proportion of men paid by results in different industries in the United Kingdom was given in Chapter 3, Table 3.8. It varies, among manufacturing industries, from 2 per cent in food, drink and tobacco, to 67 per cent in ship-building and marine engineering (1961 figure).

[65] In Sweden and Norway a large proportion of construction workers are paid by results (generally in group schemes).

TABLE 5.13

France : Average earnings[a] by age and occupational groups, 1964 (men)

As percentage of the maximum for each occupational group

Occupational group	21-25	26-30	31-40	41-50	51-60	61-65	65 and more	All ages
Managerial and technical staff (*cadres*)								
Higher	34	51	72	82	89	93	*100*	78
Lower	52	73	93	97	97	*100*	93	87
Clerical workers	64	79	88	88	83	*100*	71	77
Foremen	75	91	*100*	*100*	98	96	88	98
Qualified workers	85	96	*100*	*100*	95	91	86	95
Semi-qualified workers	89	97	*100*	98	93	87	84	94
Unskilled labourers	95	*100*	*100*	99	94	90	95	95

Hierarchy of average earnings and age

Average earnings of unskilled labourers = 100

Occupational group	All ages	31-40	At age of maximum earnings
Managerial staff			
Higher	554	482	671
Lower	280	283	304
Clerical workers	155	168	190
Foremen	230	222	221
Qualified workers	146	145	146
Semi-qualified workers	122	122	122
Unskilled labourers	*100*	*100*	*100*

Source: Etudes et Conjoncture, 1966, No. 7, p. 35.

[a] Earnings in industry, trade and non-governmental services.

opportunities for substituting a system of payment by results which depend on collective performance.

The level of pay varies with *age*. This is illustrated, for France in 1964, by Table 5.13. For both managerial and clerical men workers, earnings rise with age up to normal retirement (indeed beyond it for higher managerial staff). By contrast, in all groups of manual work, men attain their maximum earnings between 30 and 50 (between 25 and 40 for the unskilled). Moreover, the higher the grade, the greater the variation in earnings. For the managerial group, average earnings double over the years (ignoring the few men of 21-25 classed as higher managerial); for clerical workers they rise by 50 per cent, and for foremen by one-third. But for skilled and semi-skilled manual workers, maximum earnings are only 10-20 per cent above the starting point (at 21-25) and sink back as much thereafter. For unskilled workers, the differences with age are narrower still.

It must be emphasized that these data do not necessarily indicate the course of pay during an average career; the statistics relate to the various distinct "cohorts" of men, whose education and training will have differed.

Among the factors explaining variations in earnings with age, three principal ones may be distinguished: seniority increments, changes (up or down) in status within each major occupational group, and finally age as such.

Seniority increments (including additional paid holidays and superannuation benefits) are quite widely practised by enterprises, as well as in the public services, in the effort to retain a stable staff; they are, of course, most frequent among the higher-paid grades. Whatever the advantages of seniority increments for the individual enterprise, whether public or private, it must be doubted whether society as a whole gains much from the conferring of special advantages on those who restrict their experience to a single employer. If the purpose is simply to reward fidelity, the advantages conferred may often appear somewhat excessive.

Reference has already been made to the significance of promotion to more highly qualified work. It plays an increasingly important role as the occupational hierarchy is ascended and the range of potential earnings opens more widely.

It is difficult to distinguish pay for age in itself from the consequence of efficiency rising with age. For some occupations, i.e. non-manual, there are automatic increases up to a certain point (as distinct from promotion). For others — indeed for most manual workers — there is not. Does this reflect a distinction in growth of productivity? Productivity, which can be measured for many manual workers, probably ceases to rise at a fairly early age. For non-manuals the question is whether the automatic increase in pay is a fair measure of the efficiency resulting from experience, or whether it is partly the acceptance of a sociological principle that pay *ought* to increase with age. The difficulties experienced by qualified people of 40-45, who lose their jobs, in finding another at equal pay may suggest that age in itself is often over-paid.

The last of the "personal" characteristics affecting pay to be considered here is the difference between *men's* and *women's* pay. In most countries of western Europe, the activity rates of women have increased since the war, in some cases quite sharply. The proportions of women working in 1961 were as follows:

Activity rates for women of 15 and over in 1961

	Agricultural occupations	*Non-agricultural occupations*	*Total*
Austria	10.6	36.6	47.2
Belgium	2.2	28.3	30.5
France	7.6	29.3	36.9
Western Germany	5.8	35.9	41.7
Italy	9.1	22.0	31.1
Norway	5.2	24.9	30.1
Sweden	4.6	39.9	44.5
United Kingdom	1.7	38.4	40.1

Source: "L'emploi féminin en 1962 et son évolution depuis 1954", *Etudes et Conjoncture*, 1964, No. 12, p. 5.

Data of women's earnings relatively to men's are given in Table 5.14 for some major industry groups, with wage-earners and salary-earners shown separately. The relative inferiority of women's pay varies between countries and between industries. In seven of the eight countries shown, the differential against women wage-earners has diminished over the twelve years covered by the table, but only slightly (rather more in Belgium and the Netherlands than elsewhere). Only in the United Kingdom has the differential widened.

The Nordic countries and France show the smallest differentials for women wage-earners; their average earnings are about 65-70 per cent of those for men (the figures relate to manufacturing industry but do not seem very different, where data are available, for the economy as a whole). Belgium, western Germany and the Netherlands come in an intermediate position, with a ratio of 60-65 per cent. But in the United Kingdom, the ratio is down to 50 per cent.

Sex differentials by occupational groups are shown for three countries in Table 5.15. It will be seen that in all three countries — France, western Germany and the United Kingdom — there is a general, although not invariable, tendency for the woman's pay disadvantage to diminish as the hierarchy is ascended. At the same time it may be noted that the women's disadvantage is frequently greater in the major groups than in the subdivisions (e.g. in France, in 1964, women's earnings for all manual occupations were only 67 per cent of men's; but the proportion was higher in each of the four skill

TABLE 5.14

Earnings of females in selected industries as percentage of corresponding earnings of males

Average of 3 years at I beginning and II end of the period 1953-1965

Industry	Belgium		Denmark		France		Western Germany		Netherlands		Norway		Sweden		Switzerland		United Kingdom	
	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II
									Wage-earners									
All activities [a]	55	59	..	..	64	65	59	60	56	60	..	..	..	..	..	..	53	50
Manufacturing	57	60	65	67	65	65	62	63	56	61	68	70	69	71	..	..	51	48
of which:																		
Food, beverages, tobacco	62	66	71	74	71	69	58	58	55	60	70	73	76	78	..	..	54	51
Textiles	68	70	69	73	69	66	67	68	59	63	72	75	79	79	..	..	57	54
Clothing and footwear	58	65	64	69	69	67	54	55	62	63	73	74	74	76	..	..	56	55
Metal using	59	66	63	67	70	69	64	66	56	66	75	80	70	73	..	..	53	49
Trade and banking	60	60	..	..	74	72	63	65	54	57	..	..	..	..	..	..	..	..
									Salary-earners									
All activities [a]	48	49	..	..	76	76	61	62	..	..	..	..	..	..	61	61	42	41
Manufacturing	47	49	..	..	74	75	61	61	..	..	..	..	..	..	61	61	41	40
of which:																		
Food, beverages, tobacco	44	46	..	..	67	68	61	62	..	..	..	..	..	..	60	61	40	39
Textiles	45	46	..	..	73	71	..	..	..	..	..	..	..	..	65	63	37	37
Clothing and footwear	51	53	..	..	74	73	..	..	..	..	..	..	..	..	65	65	41	41
Metal using	50	51	..	..	77	80	63	61	..	..	..	..	..	..	60	61	41	40
Trade and banking	49	50	..	..	74	74	58	59	..	..	..	..	..	..	63	63	..	..

Sources and methods: see pages 34-35.

[a] i.e. the 13 branches listed in Table 5.2.

TABLE 5.15

Female earnings by occupations as percentage of corresponding male earnings

Occupational group	France			Western Germany				United Kingdom		
	1956	1960	1964	1950	1957	1961	1965	1935-1936	1955-1956	1960
Manual workers	64	65	67	60	58	62	62	..	..	..
Unskilled labourers	..	80	77	66	66	70	70	57	52	53
Semi-skilled workers	..	70	71	..	61	65	66	..	57	58
Skilled workers	..	66	68	..	58	63	64	44	51	50
Foremen	..	76	80	..	..	..	..	57	61	59
Clerical workers	78	76	77	..	74	76	77	52	61 [a]	63 [a]
Office clerks	..	83	82	..	..	..	..	..	..	..
Trade	..	56	58	..	..	..	..	..	..	..
Managerial and professional staff										
Lower	65	68	68	..	76	75	76	69	72 [a]	72 [a]
Technicians	..	70	73	..	77	78	76	..	..	..
Administrative	..	73	76	..	79	78	79	..	..	..
Higher	56	60	64	..	77	78	78	..	56	56
Engineers	..	70	81	..	83	84	84	..	..	..
Administrative	..	64	65	..	78	80	80	..	..	..

Sources: same sources as for Table 5.14.

[a] These proportions are much higher than those which appear from the comparison of earnings of women salary-earners with those of men in Table 5.17. The figures above are based on the examination of pay in a number of selected occupations, including the civil service, for which data were available. The figures in Table 5.17 exclude the civil service and all non-industrial occupations. The mean pay ratio for all women non-manual workers must lie between these figures.

grades). This reflects the generally lower proportion of women in the higher sub-grades within each major group.

It is also significant that, although women's relative earnings in France are higher than in western Germany or the United Kingdom, the inter-country differences are rather smaller in the non-manual grades, and in the case of managerial and professional staff the ratios for western Germany are appreciably higher than for France.[66]

Several reasons can be found why the sex difference in earnings should persist, notwithstanding the fact that most western European countries have adhered to the ILO Convention No. 100 establishing the principle of equal pay, as between men and women, for equal work.[67]

Thus standards of rates of pay in these countries must normally be the same for men and women; in France, for example, it is illegal to provide different rates in collective agreements. In western Germany, too, the former separate rates normal in collective agreements would be contrary to the principle of equality embodied in the Basic Law; instead, it is common to include "light work" wage categories. These "do not proclaim to all the world that they are essentially reserved for women's work", but that is the effect in practice.[68] In the United Kingdom, on the other hand, separate basic rates for men and women in collective agreements are still quite normal, although the differentials are generally much less than those exhibited in the statistics of average earnings.

The major influence on the sex differential in average earnings is therefore the difference in occupational composition, in the working population as a whole, within each industry and within each major occupational group. Subsidiary reasons are that the industries employing the largest proportion of women tend to be the industries where pay is generally below average — food trades, textiles, clothing. (Whether wages are lower in these industries because more women work there is uncertain; they have not always been low-paid industries, although the tradition of female employment in them is a long one.) Again, women are less likely to be employed on piece-work and may take a smaller share of overtime.[69]

It is beyond the scope of this study to inquire how far this is the result of systematic discrimination in the access of women to the better-paid occupations, and how far it is due to the inferior educational qualifications of women or to their — on average — shorter working lives.[70]

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[66] For the United Kingdom figures, see the note on Table 5.15.

[67] The convention has been signed by Austria, Belgium, Denmark, Finland, France, Iceland, Italy, Norway and Sweden, among western European countries. The principle has, of course, been applied — at least to particular branches — in other countries (e.g. to the Civil Service in the United Kingdom).

[68] H. Hartmann, "Incomes policy in Germany: a trade union view", *British Journal of Industrial Relations*, November 1964.

[69] Nevertheless, in the British cotton industry, where piece-work for most jobs used to be normal, there is a long tradition of non-discriminating piece-rates. In spite of this, women tended to earn substantially less than men. This may not be due only to lesser output per head on the part of women. It may often happen, in such circumstances, that the better-paid jobs are allocated to men.

The dispersion of pay between occupational groups

The results of the complex influences operating on occupational pay differences may now be summarized. Comprehensive data are available for only a few countries, and rigorous comparison between their pay structures is impossible: definitions differ too much and the information is of unequal value. Estimates of the evolution of the structure over time in each country may, however, be more reliable. We shall examine first the broad lines of the pay structure by occupational groups, and then the pattern within each group.

Table 5.16 presents estimates of average earnings in each occupational group for eight western European countries and, for comparison, the United States. The average earnings in each group are expressed as multiples of the average earnings of an unskilled labourer. It will be understood that within each group there may be a considerable dispersion; the dispersion of individual incomes is, therefore, bound to be much wider.

For men, the range between the averages for major groups is widest in Italy (for which the estimates are particularly rough): the top major group — higher managerial and professional staff — earns about seven times the average pay of an unskilled worker. The range is almost as wide in France: up to 5½. Denmark, Sweden and the United Kingdom display a distinctly narrower range — the average in the higher managerial and professional group is between three and four times that for unskilled labourers. In Norway, western Germany and the United States the range is narrower still — with a ratio of 2 to 2½. As already indicated, these comparisons may be influenced by differences in the definition of the groups and by the differing completeness of the data, especially in the upper groups.[71]

Within the manual [72] and clerical groups (the clerical average being generally not very different from that of skilled workers) the range increases to 1.7-1.8 in France and the United States, but does not exceed 1.5 elsewhere. Again, it appears that dispersion is wide in France, and narrow in western Germany and Norway. For the United Kingdom, the United States and Switzerland, it has been possible, for some groups, to trace the evolution in the pay structure back to pre-war years. In each country, dispersion has tended to narrow, and to roughly the same extent.

Up to the middle 1950s (in those European countries for which there is information), the structure remained stable for manual workers and clerks, but the range widened for managerial and professional staffs in France and Sweden; in the United States, this opening out affected most of the groups shown. Since the mid-1950s, the dispersion has tended to widen throughout the hierarchy in France and the United Kingdom, but has narrowed further in western Germany. In Norway, Sweden and Switzerland, the pay structure among manual workers and clerks has remained remarkably stable during the past decade, but in Norway and Sweden there is evidently some opening out in the managerial and professional groups.

Corresponding data for women are fewer. But they show a general widening of the occupational pay ratios, especially in the managerial and professional groups. Western Germany, however, is an exception: the dispersion for women has narrowed appreciably and continually.

Manual workers

Among manual workers, the major long-period tendency has been towards a reduction in the relative pay of skilled workers in relation to the unskilled, by comparison with pre-war (see Chart 5.4, page 32). This tendency continued until different dates in different countries, and in most has been partially reversed in more recent years. The turning point seems to have occurred in the early 1950s in Denmark and France,[73] in the mid-1950s in Sweden, the United Kingdom and Norway, but not until the early 1960s in Austria and western Germany.[74] At their lowest point the skill differentials showed a loss of 5 per cent in the United Kingdom, 6 per cent in France, 8 per cent in Switzerland and as much as 13 per cent in the Netherlands. By the latest year shown, the skill differentials in France and the United Kingdom had regained most of the ground lost since pre-war; they increased by about 5 per cent in Austria, Denmark and western Germany. In the Netherlands there is no evidence of the decline being stemmed (up to 1962; data are not available thereafter); and in Switzerland the differential has not recovered. In both the Netherlands and Switzerland, the latest figures still indicate a skill differential far below that of the pre-war years. It is noticeable that in the Netherlands the skill ratio was very stable during the 1950s, but fell sharply after 1959

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[70] Recent progress in educational provision is reflected in the following figures for France, based on the census for 1962:

Proportion of qualified women (diplômées) as proportion of qualified men, at various educational stages

	Primary	*Superior primary*	*Secondary*	*Superior*
All ages	91	139	93	30
25 to 29	96	164	122	53

[71] In particular, it seems likely that the figures for western Germany include in the upper grades a rather wider variety than for other countries. The general ranking of the countries shown is not, however, inconsistent with that shown by various measures of individual income dispersions presented in Chapter 6 (pages 15 to 21) — especially the wide dispersion in France, the moderate dispersion in the United Kingdom and Sweden, the moderate or narrow dispersion in western Germany and the narrow dispersion in Norway.

[72] Excluding foremen, etc., for whom data are not available for several countries.

[73] Data relate to "most common rates" paid, not to actual earnings.

[74] In Italy the deterioration of the relative pay of skilled workers continued, but the figure for Italy relates to conventional wage rates. Actual men's earnings (in 1961) exceeded conventional rates by nearly 50 per cent for skilled workers, 36 per cent for semi-skilled, 26 per cent for "specialized", and 16 per cent for unskilled. (Ammassari and Scaiola, *I salari di fatto in Italia*, Milan 1963.)

TABLE

Average earnings by occupational groups in selected

As a multiple of earnings

Occupational group	Denmark 1965	France 1948	France 1956	France 1962	France 1964	Western Germany 1957	Western Germany 1961	Western Germany 1965
Manual workers and clerks								
Unskilled labourers	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Semi-skilled workers	..	1.19	1.19	1.25	1.22	1.17	1.15	1.13
Skilled workers	1.24	1.40	1.38	1.42	1.46	1.26	1.24	1.25
Foremen	1.8	..	..	2.2	2.3	..	..	..
Clerks	..	1.4	1.4	1.6	1.5	1.0	1.0	1.0
Office clerks	1.3	..	..	1.5	1.6	..	..	..
Trade	1.2	..	..	1.8	1.7	..	..	..
Managerial and professional staff								
Lower	..	..	2.4	2.7	2.8	1.5	1.5	1.4
Technicians	1.5	2.0	..	2.4	2.4	1.6	1.6	1.5
Administrative	2.1	..	..	2.9	3.2	1.5	1.4	1.3
Higher	..	3.8	4.9	5.4	5.5	2.1	2.0	1.8
Engineers	4.0	..	..	5.0	4.9	2.2	2.1	1.9
Administrative	4.3	..	..	5.5	5.9	2.0	1.9	1.8
Manual workers and clerks								
Unskilled labourers		..	1.00	1.00	1.00	1.00	1.00	1.00
Semi-skilled workers		..	..	1.09	1.12	1.08	1.08	1.07
Skilled workers		..	..	1.18	1.28	1.11	1.12	1.14
Foremen		..	..	2.1	2.4	..	..	..
Clerks		..	1.5	1.5	1.5	1.2	1.1	1.1
Office clerks		..	..	1.6	1.7	..	..	..
Trade		..	..	1.3	1.3	..	..	..
Managerial and professional staff								
Lower		..	2.2	2.3	2.5	1.8	1.6	1.5
Technicians		..	..	2.1	2.3	1.9	1.8	1.6
Administrative		..	..	2.6	3.1	1.8	1.6	1.5
Higher		..	3.9	4.1	4.6	2.4	2.2	2.0
Engineers		..	..	4.3	5.1	2.7	2.5	2.3
Administrative		..	..	4.5	4.9	2.4	2.2	2.0

Sources and methods: see pages 34-35.

[a] For wage-earners data refer to the mechanical engineering industry only. For engineers and higher administrative staff data exclude earnings of top executives.

[b] No data by skill are available for wage-earners. For engineers and higher administrative staff data exclude earnings of top executives.

when wage policy began to allow greater scope for wage differentiation.

For semi-skilled workers, the pay ratio to unskilled workers in France, the Netherlands and western Germany has followed, in modified rhythm, that of skilled workers, but without any recent recovery; while in the United Kingdom — for which data are available only for a few years — the pay ratio in the late 1950s was higher than before the war and rising slightly.

Pay statistics for about seventeen specific manual occupations — most often referring to standard rates which destroys a good deal of their significance — are presented in Table 5.17 for 1953 and 1964 (with figures for 1938 in a few cases). The pay rate for each occupation has been taken as a ratio of the rate for unskilled labourers in construction, taken as a common denominator.

So far as these figures go, certain conclusions emerge from an analysis of pay dispersion among these occupations. Thus Belgium and Sweden show a wide dispersion while the United Kingdom shows a very narrow one. The generally rather low ratios in Denmark and Sweden confirm the relatively favourable position, already noted, of construction workers in these countries. It can also be seen how compositors and miners, occupying the summit of the pyramid, have lost part of their advantage (especially the miners).

.16

western European countries and the United States

f unskilled labourers

Italy	Norway [a]			Sweden [b]			Switzerland [c]				United Kingdom			United States [d]		
1959	1956	1960	1964	1953	1957	1963	1939	1948	1960	1965	1935-1936	1955-1956	1960	1939	1950	1958
Men																
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.10	1.08	1.08	1.09								1.04	1.08	1.09	1.50	1.48	1.57
1.24	1.14	1.14	1.15				1.31	1.21	1.20	1.20	1.51	1.43	1.49			
..	..	..	..	1.3	1.4	1.4	..	..	..	..	2.1	1.8	1.9	2.0	1.8	2.0
1.5	..	..	..	..	..	..	1.4	1.3	1.3	1.3	..	..	..	..	..	..
..	..	..	..	1.3	1.3	1.3	..	..	..	..	1.5	1.2	1.3	2.1	1.6	1.8
..	1.0	1.1	1.0	0.9	1.0	1.0	..	..	..	..	..	..	..	1.9	1.7	1.7
..	..	..	..	..	..	..	1.9	1.8	1.8	1.7	2.4	1.4	1.6	..	..	..
3.0	1.4	1.5	1.5	1.7	1.8	1.9	..	..	..	..	..	..	..	..	..	..
2.0	1.2	1.3	1.3	1.5	1.7	1.8	..	..	..	..	..	..	..	..	..	..
7.0	..	2.4	2.4	..	..	..	..	..	..	..	3.8	3.4	3.5	..	..	..
..	2.2	2.4	2.4	2.7	3.1	3.2	..	..	..	..	..	..	..	2.7	2.1	2.4
..	1.9	2.4	2.4	2.0	2.9	3.1	..	..	..	..	..	..	..	3.2	2.3	2.4
Women																
				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
											1.18	1.19	1.20			
											1.37	1.40	1.40			
				..	..	..	..	..	..	..	2.1	2.1	2.1			
				..	..	..	..	..	..	..	..	..	..			
				1.3	1.5	1.5	1.5	1.2	1.3	1.3	1.4	1.4	1.5			
				0.9	1.0	1.0	..	..	..	..	..	..	..			
				..	..	..	..	..	..	..	2.9	1.9	2.1			
				..	..	..	1.9	1.6	1.7	1.7	..	..	..			
				1.5	1.8	1.9	..	..	..	..	..	..	..			
				..	..	..	..	..	..	..	..	3.7	3.8			
				..	..	..	..	..	..	..	..	..	..			
				..	..	..	..	..	..	..	..	..	..			

[c] Earnings of unskilled labourers are not shown separately. Data refer to multiples of earnings of semi-skilled and unskilled workers for men, and to all wage-earners for women.

Semi-skilled and skilled workers refer to "operatives".

Mean deviation of pay in about 17 selected occupations
(as percentage of average)

	1953	*1964*
Austria	10.2	15.2
Belgium	22.2	20.2
Denmark	12.4	14.9
Finland	9.0	11.6
Western Germany	18.0	13.6
Ireland	17.6	13.6
Netherlands	12.1	14.6
Sweden	26.1	19.7
Switzerland	14.5	12.4
United Kingdom	9.7	11.9

Source: Table 5.17. The figures relate to a slightly different number of occupations in some countries.

The dispersions exhibit a marked narrowing in western Germany, Ireland, Switzerland and Sweden.

Various explanations have been suggested for the general tendency for the narrowing of wage differentials by categories of skill. For example, the extension and improvement of compulsory education over a long period have raised the educational status of the average worker. Thus the unskilled worker may be expected to have a higher relative economic "value" than in the past. Indeed it may be deceptive to compare the people in this general category today with those of 30 years ago. This type of change, however, is essentially continuous and gradual; it can hardly explain the changes in pay differentials which, when they occurred, occurred rather suddenly.

The supply of unskilled labour, it has been suggested, falls over time more quickly than the demand for it and is inelastic (although the supply of unskilled female labour might be regarded as elastic). The common reduction in the skill differential since pre-war, and the modest extent to which it has recovered during the postwar period, cannot easily be explained in terms of supply and demand. All the evidence suggests that the demand for skilled — and semi-skilled — labour has been increasing and, indeed, exceeds supply.

TABLE 5.17

Hourly wage rates or earnings of adult male wage-earners in certain occupations

As percentage of wage rates or earnings of unskilled labourers in the construction industry

Industry	Occupation	Year	Austria	Belgium	Denmark	Finland	Western Germany	Ireland	Netherlands	Sweden	Switzerland	United Kingdom
			Rates	Rates	Earnings	Rates	Earnings	Rates	Rates	Earnings	Rates	Rates
Coal mining	Coal hewers	1953	100	226	.	..	171	..	159	..	..	..
		1964	116	167	..	..	128	..	180	..	..	123
	Helpers, leaders	1953	98	167	..	..	..	..	147	75	..	127
		1964	100	129	..	..	79	..	162	..	..	123
Food	Bakers (ovenmen)	1938	..	123	88	..	..	155	100	82	138	105
		1953	121	138	79	..	107	124	117	66	156	102
		1964	144	117	..	..	107	122	121	71	129	109
Textiles	Spinners	1953	80	104	81	100	111	75	96	54	..	..
		1964	81	90	72	82	98	80	99	..	..	..
	Labourers, unskilled	1953	74	95	71	94	83	66	90	47	..	83
		1964	77	..	71	74	86	73	95	..	..	79
Furniture	Cabinet-makers	1938	..	129	95	..	..	135	107	83	138	133
		1953	108	133	92	106	104	120	111	73	126	115
		1964	103	125	95	88	111	116	113	78	118	115
Printing	Machine compositors	1938	..	153	109	..	..	147	121	105	170	155
		1953	107	130	100	120	138	131	128	75	147	130
		1964	149	114	123	118	137	130	132	99	127	130
	Labourers, unskilled	1938	..	89	73	..	..	92	88	80	74	104
		1953	81	..	85	110	100	99	98	56	93	104
		1964	102	..	105	95	105	101	105	61	83	108
Iron and steel	Melters	1953	98	..	85	..	136	..	114	..	..	..
		1964	138	..	..	90	128	..	129	..	..	..
	Labourers, unskilled	1953	85	103	..	..	122	..	97	..	..	93
		1964	87	80	..	78	110	93	101	..	..	95
Machinery	Fitters (assemblers)	1938	..	132	101	..	..	119	100	90	127	114
		1953	98	..	99	117	125	121	110	..	..	101
		1964	129	114	98	90	120	116	129	83	106	95
	Labourers, unskilled	1938	..	93	81	..	..	90	84	69	87	89
		1953	85	103	81	98	95	94	101	65	..	87
		1964	87	91	83	78	94	94	101	69	..	80
Construction	Bricklayers	1938	..	124	136	..	..	138	110	168	125	133
		1953	91	124	123	135	..	121	122	143	118	115
		1964	118	114	121	114	123	116	133	131	118	115
Railways	Permanent-way labourers	1938	..	113	..	..	..	64	74	84	104	80
		1953	95	105	..	101	..	82	111	80	125	87
		1964	110	84	60	79	..	84	119	..	111	87
Trams and buses	Drivers	1938	..	117	..	..	..	99	95	102	147	110
		1953	90	..	..	..	..	96	120	84	162	98
		1964	114	..	82	95	..	100	144	..	162	104
Municipal services	Labourers, unskilled	1938	..	120	91	..	..	103	79	107	124	94
		1953	87	105	..	100	..	94	102	104	133	93
		1964	112	83	87	85	..	94	125	86	124	97

Sources: Derived from data for October of each year, published by the International Labour Office, in the *Year Book of Labour Statistics, 1939. International Labour Review (Statistical Supplement)*, August 1954, and the *Bulletin of Labour Statistics*, second quarter 1965.

Three more or less independent factors may represent nore plausible explanations of the reduced skill differentials. First, the major compressions of the differentials, ıs has been pointed out, occurred during or immediately ıfter the war, and seem to have been precipitated by nflation; wage increases associated with increases in he cost of living often tended to reduce differentials (through equal absolute increases for all grades, or percentage increases decreasing according to the wage evel).[75] At the same time, trade unions were, in some countries, able to increase their membership among the ower-paid members, which would reinforce the tendency owards a union policy of solidarity. Finally the effect of a legal minimum wage, where it exists, would have some effect in raising the pay rates of the lowest paid.[76]

These tendencies towards reducing the dispersion have, as was suggested, been largely frustrated by drift, which has often allowed the skilled and semi-skilled to regain their relative positions.

Clerical workers

Office clerks (with whom shop assistants are included in Table 5.16, except in the United Kingdom)[77] generally have average earnings for men not very different from those of skilled manual workers. The exception is western Germany, where average clerical earnings are about on the same level as those of unskilled manual workers. There is no evidence of any marked change in the relative pay of this group during the postwar period, except in the United States, where it has fallen off substantially. The position is rather similar for women clerical workers in the four countries for which data are available. The increasing proportion of clerical workers in the active population might have been expected to produce some increase in their relative earnings. Perhaps increasing opportunities for women have been a factor keeping men's earnings down, together with the continued preference for "white collar" jobs in spite of relatively low pay. It seems that increasing supply of both men and women qualified for these occupations has at least kept pace with the rising demand.

Data for a few occupations in the clerical and sales group are given in Table 5.18 (taking shop assistants in retail grocery — the only occupation given for all coun-

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[75] This explanation is emphasized — in relation to the whole occupational pay structure — by G. Routh, *Occupation and Pay in Great Britain 1906-1960*, CUP 1965, page 150.

[76] The direct effect of a minimum wage may be modest. In France for example, in September 1965, it directly determined the pay of only 250,000 wage-earners in industry and trade, and 150,000 agricultural workers (*Le Monde*, 1 September 1965). But it had the indirect effect of pushing up the wages of a larger number of workers with slightly higher wage levels. (See also Chapter 4, page 22.)

[77] In the United Kingdom, the source from which Table 5.16 is drawn includes shop assistants with semi-skilled manual workers.

TABLE 5.18

Salaries of male and female salary-earners in certain occupations

As percentage of the corresponding salary of sales persons in retail grocery

Occupation	Year	Austria	Belgium	Finland	Western Germany	Ireland	Italy	Sweden	United Kingdom
					Males				
Laboratory assistants (chemistry)	1953	169	108	..	191	128	..	71	..
	1964	95	107	..	132	103	..	..	..
Stock clerks in wholesale grocery	1953	104	100	126	118	..	128	108	108
	1964	130	100	120	114	..	..	..	114
Banks: tellers	1953	173	124	..	162	248	182	153	..
	1964	163	105	..	156	292	..	..	..
Banks: accounting-machine operators	1953	127	100	..	132	..	161	..	..
	1964	127	114	144	127	266	..	..	..
					Females				
Trained nurses (iron-and-steel industry)	1953	118	132	..	..	..	..	169	..
	1964	163	123	..	..	..	..	..	..
Laboratory assistants (chemistry)	1953	169	105	..	191	192	..	87	..
	1964	95	107	..	132	140	..	..	..
Stenographer-typists (wholesale grocery)	1953	98	110	150	103	..	..	135	..
	1964	115	114	151	100	109	..	..	..
Banks: accounting-machine operators	1953	127	100	126	132	134	..	..	..
	1964	127	111	146	127	221	..	..	..

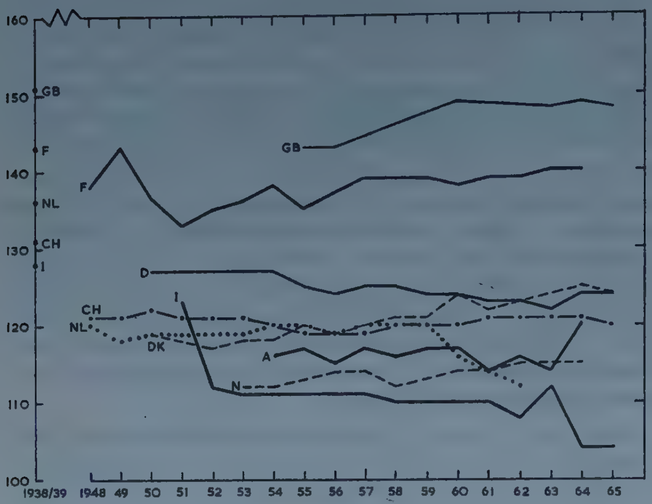
Sources: Derived from data for October of each year, published by the International Labour Office, in the *International Labour Review (Statistical Supplement)*, August 1954, and the *Bulletin of Labour Statistics*, second quarter 1965.

CHART 5.4

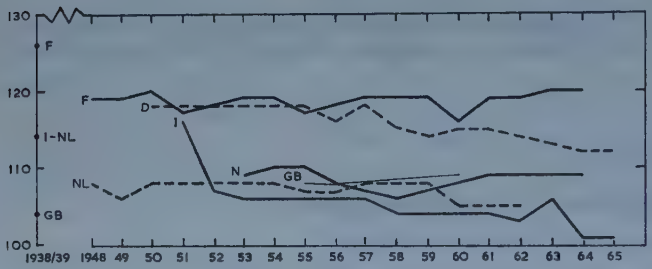
Differentials by skill for wage-earners

(Earnings of skilled and semi-skilled workers as percentage of corresponding earnings of unskilled labourers)

Skilled



Semi-skilled



Sources and methods: see pages 34-35.

tries — as a reference base). The variety of pay relatives between countries, and the different changes over the past decade, are remarkable. But it is uncertain whether this is due to differences in the pay of shop assistants in retail grocery or in the jobs compared with this reference base.

Managerial and professional staff

A notable factor in this group is the difference between countries in the relative pay of the technical and administrative channels of promotion. Among the few countries for which data exist, Denmark and France show distinctly higher pay, at both lower and high levels, for administrative than for technical staff. On the other hand, there is little difference between the two channels in western Germany, Norway, Sweden or the United States.[78]

5.3. SUMMARY AND CONCLUSION

The spread of average earnings, whether analysed by industry or by occupational group, varies widely between countries in spite of the similarity in the economic structure of the western European countries examined. Both sets of relationships fluctuate in the short term, for example with the business cycle, but the groups which lose their relative position tend to lose them only temporarily. The process of recovering losses in pay relatives is itself, of course, a potent contribution to the general rise in money incomes. In the longer term, pay structures tend to be very stable — apart from a certain tendency for women to improve their relative position, and for some relief for the lowest paid groups.

By industry, the pay structures of western Europe display certain common features — notably (although not invariably) the relatively low positions held by the food, textiles and clothing industries. The most striking difference between countries is shown by the construction industry — near the top of the hierarchy in the Scandinavian countries and the Netherlands, but near, or below the average elsewhere. Dispersion between industry averages is widest (for men wage-earners) in France and Belgium, and narrowest in Austria, Denmark, the Netherlands and Switzerland.

The significant differences in average earnings between branches of industry, regions and enterprises appear to exercise only a very limited influence on movements of manpower. Indeed the usefulness of differentials for this purpose may be doubted, not only because of their ineffectiveness but also because they may permit the survival of less-productive enterprises. The tendency is to take the view that the best use of manpower resources is more likely to be promoted by direct encouragement of mobility, by training, and by facilitating geographical movement through provision of housing or contributions towards the cost of movement.

Analysis of inter-occupational pay relations is rendered imprecise by lack of comparable data. So far as can be seen, the occupational pay structures have on the whole also remained stable; some narrowing during or immediately after the war has been only in part reversed in more recent years. The extent of the dispersion varies a great deal between countries, although not in quite the same way as the inter-industry dispersion: for occupational pay patterns, France (as also for industry relatives) and Italy show wide dispersions; western Germany and Norway show narrow ones.

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[78] Data on trends in pay rates in some of the liberal professions in a few countries, up to about the middle 1950s, have recently been assembled by T. Scitovsky, who has related them to average earnings in the whole active population in the countries concerned (Denmark, France, western Germany, Norway, Sweden, United Kingdom and United States). The professions quoted are physicians, dentists, lawyers, university professors, and senior civil servants. The general tendency since pre-war has been towards a deterioration in relative pay; however, it is the physicians and dentists who in almost every country have best maintained their relative position — indeed physicians have improved their relative income in France and the United States. In each profession, the range between countries is wide. (Tibor Scitovsky, "Les tendances des revenus des professions libérales", *Analyse et Prévision*, Tome 1, No. 3, March 1966, SEDEIS; also, with less detail, "International comparison of the trend of professional earnings", *American Economic Review*, March 1966.) Another study of the pay of general medical practitioners for the early 1950s shows pay as a multiple of the average income per occupied person: the multiple lay between 4½ and just over 5½ in France, Italy, Netherlands, Switzerland, the United Kingdom and the United States. (See International Labour Office, "The Cost of Medical Care" (1959), Chapter IV.)

The conflict between "market forces" as a determinant of relative pay, and the principle of "equal pay for equal work", has led to efforts to rationalize methods of measuring the relative "value" of different kinds of work. Although the application of such methods has been encouraged in several countries by government policy, or by unions and employers acting on the national level, it has not been as successful as it was hoped; this is largely because of the operation of drift, but in addition the difficulties are considerable of reconciling collective bargaining with an "objective" method of determining pay relatives.

Direct intervention of government in influencing relative pay structures has been rare in western Europe. The analysis confirms the importance of custom and tradition as forces which maintain a rather stable pattern, both by industry and by occupation, in spite of great changes both in the pattern of demand for different categories of manpower and — through the development of education — in the supply.

One of the conspicuous efforts to change the pay structure, however, has been the recognition in several countries of the principle of "equal pay for equal work" as between men and women. In this respect, the pay structures differ quite widely between countries. Yet when average actual earnings, even for given groups, are observed, it is rare to find women's pay at more than three-quarters of that of man in the same group (this level being reached in France and the Scandinavian countries). Where the principle is not generally accepted (e.g. in the United Kingdom), it falls below a half.

It may well be suggested that in contemporary conditions in western Europe the pattern of relative pay — although differing from country to country — is, within obvious limits, a datum to which other characteristics of the economy, including perhaps the price structure and the structures of employment, become adjusted. The pay structure may even appear to have become an exogenous variable, determined independently by history and social institutions, rather than the result of the play of market forces.

It is not impossible that ways may still be found of developing methods for the evaluation of jobs which will allow some room for the necessary adjustments — at least to long-term changes in economic and social ircumstances and which will be regarded as rational and objectively reached. At the same time, any attempt to introduce such modifications on a wide scale will be cnsuccessful unless the modifications are regarded as in accordance with the general views of society about what is fair and equitable.

Note on sources and methods to Chapter 5

EARNINGS BY INDUSTRIES

(Charts 5.1 and 5.2; Tables 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, and 5.17)

Austria

Male wage-earners: Data refer to weekly earnings in Vienna, in industry and handicrafts, as published in *Wirtschaftsstatistisches Handbuch 1963-1964.* Earnings in total manufacturing have been computed by combining data for the various industries, as it appears that official figures have a different coverage. The improved coverage starting with 1963 makes comparisons with earlier years impossible.

Figures exclude payments for holiday pay, sick leave, travel money, separation benefits, reimbursement of expenses, dwelling and children's allowances, and other allowances.

Belgium

Source: Office national de sécurité sociale, *Rapports annuels 1954-1964.* Data for wage-earners are on a daily basis, while those for salary-earners refer to monthly earnings. "Selected private services" covers the following activities: recreation, hotels, restaurants, cafés and other personal services.

Denmark

Male and female wage-earners: Data refer to hourly earnings during the third quarter of each year, for workers of over 18 years, as published in *Statistisk Årbog, Statistiske Meddelelser* and *Industriel Produktionsstatistik.* Data for "metal-using industries" include those for "basic metals".

Figures include supplements such as those for overtime, shift work, duty work, etc., but exclude holiday pay.

France

Source: INSEE, "Les salaires dans l'industrie, le commerce et les services", *Etudes statistiques, Supplément trimestriel,* No. 3, 1959; No. 4, 1960; No. 4, 1961; No. 2, 1962; No. 2 ,1963; No. 2, 1964; and *Etudes et Conjoncture,* No. 11, 1965; and No. 7, 1966.

Data refer to the average annual earnings of workers who remained with the same employer during the year under review. Figures cover activities in industry, trade and services of the private and semi-public sectors (including such services as postal service).

Earnings are net of workers' social contributions; they include payments in kind, as estimated for tax purposes.

Western Germany

Wage-earners: (1) For the various manufacturing industries, data were taken from *Statistisches Jahrbuch* and were related to earnings for the total manufacturing industries published in the same source. Figures refer to weekly earnings of workers excluding apprentices and include holiday and vacation pay, family allowances paid directly by employers in addition to legal ones and the value of free board and lodging when provided. They relate to the average of earnings in February, May, August and November. (2) For mining, energy, construction, transport, trade and banking and selected private services, data were taken from *Vierteljahrshefte zur Wirtschaftsforschung,* issued by Deutsches Institut für Wirtschaftsforschung, and were related to earnings for the total manufacturing industries published in the same source. Figures refer to annual earnings of workers excluding apprentices and include all payments in cash and in kind, as well as the employers' contributions to social security.

Salary-earners: Same source as (2) above.

Netherlands

Wage-earners: Data refer to weekly earnings of production workers of 21 years and over, in October of each year, as published in *Statistiek der lonen, Statistiek der lonen in de nijverheid* and *Sociale maandstatistiek*. Figures relate to gross wages of full-time workers excluding children's allowances, holiday supplements and other payments.

No wage inquiry has been carried out for 1961 and 1963. Figures for these years and for 1964 have been estimated by applying index numbers based on October 1962 = 100 (the coverage is not strictly consistent).

Norway

Wage-earners: Data refer to yearly averages of hourly earnings for adult workers, as published in *Lønnsstatistikk 1953-1964*. Figures include overtime pay and payments for public holidays. Some series have a limited coverage: "construction" (private sector only), "transport" (land transport only), "mining" (ore mining only) and "selected private services" (various kinds of repairs).

Sweden

Wage-earners: Data refer to yearly averages of hourly earnings, of workers of 18 years and above, as published in *Statistisk Årsbok för Sverige* and *Löner*, 1953-1963.

Figures include pay for overtime, extra shifts, public and annual holidays and other supplements. "Transport" refers to "Stevedoring only" and "Selected private service" to "Repair workshops only".

Switzerland

Source: Annuaire statistique de la Suisse and *La Vie économique*, 1953-1964. Data refer to hourly earnings for wage-earners and to monthly earnings for salary-earners, in October of each year for persons of 18 years and over. Figures include cost-of-living allowances, social benefits (including family allowances), regular supplementary benefits and, beginning 1959, also overtime pay. However, for the "metal-making", "metal-using", "watch" and "footwear industries" these payments are excluded.

Data for males were originally given for two skill levels (skilled; and semi-skilled and unskilled) and have been combined by using employment figures as weights. "Basic metals" are included under "metal-using industries", and "transport" refers to "private enterprises only".

United Kingdom

Source: Ministry of Labour Gazette, 1953-1965.

Wage-earners: Data refer to weekly earnings in the second payweek of October of each year, for persons of 20 years and over. A change in coverage occurred in 1959 which impairs a strict comparability of data.

For "Transport, storage and communications", the series given in the above source, which excludes railways and London Transport, has been combined with a series for railways, published in *Statistics on Incomes, Prices, Employment and Production*, No. 17, 1966, page 47.

Salary-earners: Data are published since 1959. They refer to monthly and weekly-paid earnings on a weekly basis, in October of each year, for workers of 20 years and above.

DIFFERENTIALS BY SKILL AND BY OCCUPATIONAL GROUPS

(Chart 5.4 and Table 5.14)

Austria

Differentials by skill for male wage-earners refer to data similar to those given by industries and published in *Wirtschaftsstatistisches Handbuch 1963-1964*.

Denmark

The following sources were used: *Statistikken, Dansk Arbejdsgiverforenings Lønstatistik*, 5/1965, and *Saernummer af Arbejdsgivaeren*, May 1966; *Industriel Produktionsstatistik 1964*.

For comparing wage-earnings, originally given on a hourly basis with monthly salary-earnings, it has been assumed that wage-earners had worked 175 hours per month.

The following correspondence has been used between the occupational groups in Table 5-14 and the Danish classification:

Trade clerks: shop assistants;
Lower technicians: laboratory technicians;
Lower administrative: chief accountants;
Higher engineers: chief engineers;
Higher administrative: directors.

France

Chart. 5.4: Data are based on actual wage rates as published in *Annuaire statistique 1951*, p. 254 for 1939; and *Etudes et Conjoncture*, No. 8, 1965 for 1948 to 1964.

Occupational differentials

1948: Monthly earnings for wage-earners, clerks, technicians and higher managerial and professional staff, covering both sexes, were derived from a special survey by the Ministry of Labour. Differentials relating to the unskilled labourers were obtained by using wage rates by skill for male wage-earners.

1956, 1962 and 1964: The following sources were used: INSEE, *Etudes statistiques, Supplément trimestriel*, No. 2, 1964 and *Etudes et Conjoncture*, No. 7, 1966. For 1956, original data which refer to all wage-earners were broken down by skill by using wage rates.

Western Germany

Data were taken from various issues of *Statistiches Jahrbuch*.

Italy

Skill differentials for wage-earners refer to collectively agreed rates published in various issues of *Rassegna di Statistiche del Lavoro*. Occupational differentials have been estimated by the SVIMEZ and published in F. Leridon and A. Sauvy, "Du calcul des revenus dans une population à la frustration sociale", *Population*, No. 4, 1961, INED, Paris.

Netherlands

Skill differentials for wage-earners have been derived from data published in various issues of *Statistiek der lonen (in de nijverheid)*.

Norway

Skill and occupational differentials were derived from data published in *Lønnsstatistikk*, 1953-1964. Skill differentials for wage-earners relate to the "mechanical engineering industry only".

Sweden

Occupational differentials were derived from data published in various issues of *Löner*. Monthly earnings of wage-earners have been estimated on the basis of hourly earnings and the average number of hours worked in industry.

witzerland

Data were derived from earnings as published in various issues *Annuaire statistique de la Suisse.*

nited Kingdom

Skill and occupational differentials for 1935-1936, 1955-1956 and 960 were taken from Guy Routh, *Occupation and Pay in Great Britain 1906-1960*, in which earnings by occupational groups have been computed by combining earnings for a set of occupations belonging to each group.

United States

Occupational differentials were based on data published by the United States Bureau of the Census, *Current Population Reports: Consumer Income*, Series P.60, No. 33, January 1960.

CHAPTER 6

THE SOCIAL REDISTRIBUTION OF INCOME

Previous chapters have concentrated on the level and distribution of factor incomes, which are the centre of interest for most contemporary discussion of incomes policies. But factor incomes are far from equivalent to the final distribution of disposable incomes among individuals and enterprises. A major redistribution of factor incomes takes place through the system of taxation and public expenditure, including social security in its various forms; and through the redistribution to households of the earnings of enterprises in the form of dividends, interest, rents and other kinds of property income. Finally, the social implications of the distribution and redistribution processes cannot be seen by examining distribution between individuals; individual incomes are pooled, to a great extent, in households or families, and for many purposes the unit for useful analysis should not be the individual but the household.

These processes of redistribution are not, for most countries, fully documented. Discussion is mainly concentrated here on redistribution brought about through government, and thus on taxation and government expenditure as instruments for a form of "incomes policy" which has existed since the origins of society. This is, formally, a redistributive policy. But it must be recognized that the processes of redistribution, on the scale which they have now reached, themselves exercise an important influence on the original distribution of factor incomes. Thus, policies for redistribution must be taken into account in the shaping of policies for distribution of factor incomes, and *vice versa.* Redistribution influences factor incomes, whether looked at from the welfare point of view, or from the point of view of production costs.

The chapter falls into three parts. In 6.1 we describe the major redistribution flows: the size and structure of the tax system on the one side, and of government expenditure on the other, considering both only from the point of view of their redistributive effects; some policy aspects reflected in recent developments are indicated. This section, being based largely on national accounts, adopts an aggregative approach, turning chiefly on the redistribution, through government, between the household and corporate sectors. In 6.2, however, we turn to the size distribution of household incomes and the influence upon it of taxes and benefits.[1] The purpose here should be to trace the incidence not only of direct taxes on income, but of the whole armoury of government operations that have a redistributive effect (whether intended or not): indirect taxes and expenditure; social security and welfare benefits and contributions; collective provision of services. Unfortunately, data are not available in many countries for so thorough an analysis and anything approaching a complete picture can be drawn only for a handful of countries. It is brought out in this section that redistribution through government operations may be not only "vertical" — between rich and poor — but also "horizontal" — between households of similar incomes but of different composition.

In view of the importance of social security as an instrument of redistribution, 6.3 is devoted to a more detailed examination of the ways in which the social security systems operate, principally by comparing four national systems of different structure.

Finally, in 6.4, some conclusions are drawn about the comparative trends in redistribution during the past 10-15 years and about the principles which appear to govern the use of the various instruments of redistribution.

It must be emphasized that it has not been possible to get data on all points for all countries, so that some of the comparative study is illustrative rather than comprehensive. Moreover, the statistical definitions and classifications in this area are still far from uniform — in part because of structural and administrative differences — so that some of the comparisons drawn must be recognized as extremely rough. Following the national accounting definition of "general government", government revenue and expenditure are wherever possible taken to include the consolidated operations of official social security institutions and of regional and local authorities, as well as of the central government, but to exclude the operations of public corporations. By "social security benefits"[2] are understood all current transfers in cash or in kind, whether through a social insurance scheme or financed from general taxation. Publicly provided health services (hospitals, services of doctors, drugs, etc.) are included, whether treatment is provided free or in return for part payment, or whether payments are subsequently refunded by the authorities, since practice differs considerably. The public provision of education and other services is *not* included as "social security". But a more comprehensive treatment of public services is covered by the discussion of "collective consumption".

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[1] The term "benefits" indicates that part of government expenditure which is regarded as bringing about a redistribution of income in favour of households. See below, p. 9.

[2] The definition may not be precisely uniform from country to country. The data used are partly from national accounts, but also from the International Labour Office's "The Cost of Social Security 1958-1960", Geneva 1964.

6.1 THE MAJOR REDISTRIBUTIVE FLOWS

It may be convenient to recall, to begin with, some of the central trends (brought out in Chapter 2) in the distribution of total factor incomes over the past ten years. These may be summarized as follows:

(i) There was a very general decline in the share of *income from self-employment* in gross national product, resulting generally from a decline in the proportion of self-employed in the occupied population and also, in some countries, from a reduction in their relative income per head.

(ii) The share of *employment income* (wages and salaries plus employers' contributions to social security) has been more sensitive than income from self-employment to cyclical fluctuations, but the basic trend has been slightly upward. In 1962-1964, a strong increase was apparent in virtually all countries, and was associated with a phase of high economic activity and tight labour market conditions.

(iii) Conversely, the share of *gross profits*[3] was most often rising in the 1950s but falling thereafter.

(iv) The share of *property income* did not show a definite pattern but in all countries such changes as took place have been very modest.

(v) One consequence of these changes was that, over the period 1953 to 1963 or 1964 as a whole, the share in gross national product of primary income of households[4] (employment income, self-employment income, income from property) generally changed very little. Indeed, in most countries (except Finland and the United Kingdom) this share would have fallen had it not been for a significant increase in employers' contributions to social security. Although such contributions are treated in national accounts as an element in primary income from employment, this treatment, as contrasted with the alternative of treating employers' contributions as a form of "tax", is mainly a matter of bookkeeping. (See also Chapter 2, page 13.)

The overall tax structure

Total taxes, including social security contributions, are equivalent to between about a quarter and a third of the gross national product in market prices in almost all western European countries (see Table 6.1). Relatively small shares are found in Belgium, Denmark, Finland, Ireland and Switzerland; apart from Ireland and Switzerland,[5] the total tax share in these countries is somewhat over a quarter. At the other extreme are Austria, France, western Germany, Norway and Sweden, where the total tax receipts exceed one-third of gross national product.[6]

In all these countries, with the single exception of the United Kingdom,[7] the tax share increased, fairly steadily, during the decade covered by Table 6.1.[8] The biggest increases in the tax share were in Belgium, Italy, Norway and Sweden — in all of which the share rose by 5 per cent or more.

Differences in the overall tax share, therefore, are not very wide. Nor are there large differences in the proportion of tax revenue derived from indirect taxes (taxes on expenditure) — or, therefore, in the share of indirect taxes in total gross national product. Table 6.1 shows that indirect taxes account for between 40 and 50 per cent of total tax receipts, except in the Netherlands, Sweden and Switzerland (30-35 per cent) and at the other extreme in Ireland, where they reach nearly 70 per cent. As a proportion of gross national product, the indirect taxes (in 1962-1964) were between 12 and 18 per cent everywhere except in the Netherlands and Switzerland, where they were 10 per cent and 7 per cent. Their share of total tax revenue — where it has changed significantly — has tended to fall (in France, western Germany, Italy, the Netherlands, Norway), while their incidence on the gross national product as a whole has generally changed very little. The significant exception is Sweden, where the indirect taxes have increased both in relation to total tax revenues and, more markedly, in relation to gross national product, rising from 9 per cent in 1953-1955 to 13 per cent in 1962-1964; this is the result of a deliberate policy of putting more weight on taxation of expenditure — hitherto rather low in Sweden — than on income taxes.

Although the weight of indirect taxes in total varies comparatively little, there are very large differences in the pattern of indirect taxes with important implications for the distribution of income. These are examined below.

The big differences in the structure of taxation, and in recent developments of tax patterns, concern the relative proportions of direct taxes and of social security contributions (from both employers and employed). These differences are of major importance for the distribution

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[3] As was pointed out in Chapter 2, the figure of "gross profits" consists of: provision for depreciation (or capital consumption); direct taxes and net saving of corporate enterprises; rents, interest and dividends from all sources; property income of general government. No more relevant classification of this hybrid aggregate is obtainable for a number of countries.

[4] The household, or personal, sector, following the national accounts, includes non-profit-making bodies and unincorporated enterprises.

[5] In Switzerland, the share is little over 20 per cent, but this low figure is partly due to incomplete recording of social security contributions. Only compulsory social security contributions are included here. In Switzerland, private voluntary systems of social insurance add considerably to the contributions.

[6] Inter-country comparisons of taxation levels need caution. Taxation includes social security contributions and it is far from certain that figures for such contributions are strictly comparable among countries. There is, in practice, some uncertainty about which social security schemes should be included in general government transactions (in principle, all compulsory official schemes are included). In particular, it would appear that (actual or imputed) contributions paid by governments for their own employees are duly recorded for some countries (for instance, in France) but not for others (for instance, in Denmark and Italy).

[7] This record is not likely to have been maintained after the period shown in the table; in 1965, the tax share rose by about 1 per cent over the 1962-1964 average.

[8] In the table, three-year averages are used to smooth out the substantial fluctuations between individual years.

TABLE 6.1

Tax receipts of general government in western European countries

Percentages

Country and period	Tax receipts as percentage of GNP at market prices	Share in total tax receipts of:				
		Direct taxes			Social security contributions	Indirect taxes
		Total	Paid by households	Other		
Austria						
1953-1955	30.6	38.7	31.7	7.0	17.9	43.4
1956-1958	30.8	35.4	28.1	7.3	19.9	44.6
1959-1961	31.3	33.9	26.7	7.2	20.1	46.0
1962-1964	34.2	34.4	27.2	7.2	20.7	44.9
Belgium						
1953-1955	22.5	33.2	26.0	7.2	23.1	43.8
1956-1958	23.7	31.2	24.3	6.9	24.8	44.1
1959-1961	25.4	29.9	23.7	6.2	24.6	45.5
1962-1964	27.9	29.7	23.6	6.1	26.7	43.5
Denmark						
1953-1955	23.2	47.7	41.6	6.1	6.0	46.3
1956-1958	24.6	47.6	42.3	5.3	5.7	46.7
1959-1961	25.2	45.6	41.0	4.6	5.8	48.5
1962-1964	27.4	45.5	41.1	4.4	5.2	49.3
Finland						
1954-1955	26.9	41.8	28.2	13.6	9.6	48.6
1956-1958	29.1	41.9	28.2	13.7	8.2	49.9
1959-1961	27.1	40.0	28.7	11.3	9.4	50.6
1962-1964	27.7	41.7	30.9	10.8	10.6	47.7
France [a]						
1953-1955	32.6	15.6	9.7	5.9	32.5	51.9
1956-1958	33.5	17.1	10.2	6.9	33.1	49.8
1959-1961	34.5	18.1	11.1	7.0	33.8	48.1
1962-1964	36.5	16.4	10.8	5.6	36.2	47.4
Western Germany						
1953-1955	32.7	30.3 [b]	20.7*	9.6*	24.6*	45.1
1956-1958	32.5	28.0 [b]	18.5	9.5	27.9	44.0
1959-1961	34.0	28.9 [b]	19.9	9.0	28.5	42.6
1962-1964	35.2	31.2 [b]	23.1	8.1	27.9	40.9
Ireland						
1953-1955	21.4	23.6	14.5	9.1	4.8	71.6
1956-1958	22.6	21.6	13.6	8.0	4.6	73.9
1959-1961	22.1	21.0	14.3	6.7	5.3	73.6
1962-1964	23.3	24.6	15.7	8.9	6.7	68.7
Italy						
1953-1955 [c]	25.6	19.5	..	..	29.1	51.4
1956-1958	27.3	21.0	..	..	29.6	49.4
1959-1961	28.4	20.7	..	..	31.3	48.0
1962-1964	30.7	19.9	..	..	35.4	44.7
Netherlands						
1953-1955	27.8	42.7	29.6	13.1	16.7	40.6
1956-1958	29.5	42.5	30.4	12.1	23.1	34.3
1959-1961	30.3	40.7	30.3	10.4	26.6	32.7
1962-1964	32.0	39.1	30.7	8.4	29.6	31.3
Norway						
1953-1955	29.3	44.7	32.6	12.1	9.1	46.3
1956-1958	31.3	44.8	35.4	9.4	10.2	45.0
1959-1961	32.8	38.5	32.0	6.5	17.0	44.5
1962-1964	34.6	38.1	33.4	4.7	19.3	42.5

TABLE 6.1 *(continued)*

Country and period	Tax receipts as percentage of GNP at market prices	Share in total tax receipts of: Direct taxes: Total	Paid by households	Other	Social security contributions	Indirect taxes
Sweden						
1953-1955	27.5	63.0	50.7	12.3	4.4	32.6
1956-1958	29.6	59.2	46.9	12.3	8.2	32.6
1959-1961	31.6	53.6	45.4	8.2	11.5	34.9
1962-1964	35.9	49.6	43.5	6.1	15.3	35.1
Switzerland						
1953-1955	18.7	42.9	34.2	8.7	22.5	34.6
1956-1958	19.0	43.1	33.5	9.6	22.1	34.8
1959-1961	19.8	42.5	32.9	9.6	22.7	34.8
1962-1964	21.1	43.3	32.9	10.4	22.3	34.3
United Kingdom						
1953-1955	29.0	41.8	23.8	18.0	10.5	47.7
1956-1958	28.3	41.1	25.7	15.4	11.5	47.4
1959-1961	28.1	39.5	27.9	11.6	13.3	47.2
1962-1964	29.1	38.9	28.9	10.0	14.7	46.4

Sources: United Nations, Yearbook of National Accounts Statistics, 1965; United Nations national accounts questionnaires; OECD, *General statistics: National Accounts Statistics*; and national statistics.

[a] From 1958 onwards, new revised series.

[b] Including other current transfers from corporations to general government.

[c] 1955 only.

of income; direct taxes are always to some extent progressive, the proportion of tax to income rising with rising income, while social security contributions are either fixed amounts, thus being in effect regressive in their effect on personal incomes, or roughly proportional (i.e. a more or less equal proportion of the employed persons' pay).

Direct taxes are the more important source of revenue everywhere except in France and Italy, where they account for only 15-20 per cent of total tax receipts. These are the two countries where social security contributions are most important, accounting for about 35 per cent of total tax receipts. At the other extreme are the countries where direct taxes make up 40-50 per cent of total tax revenue — Denmark, Finland, Sweden and Switzerland; in the Netherlands, Norway and the United Kingdom the figure is just under 40 per cent. In these countries the importance of social contributions is either very small (Denmark, Finland) or rather modest (Norway, Sweden, Switzerland, United Kingdom). The deviants from the broad inverse relationship between direct taxes and social security contributions are the Netherlands, where both are relatively large but indirect taxes low, and Ireland where both are very small, and where the bulk of the relatively small proportion of total taxes is borne by indirect taxes.

The most common tendency over the decade has been for the share of direct taxes in total tax receipts to remain stable or fall slightly (Sweden, and to a less extent Norway, showing the most striking reductions). [9] By contrast, the share of social security contributions has increased almost everywhere (Denmark and Switzerland being the exceptions); in some countries, the increase has been very large — notably in the Netherlands, Norway and Sweden. Both tendencies reflect deliberate policy: reductions in direct tax rates, without which yields from personal income taxes would have risen in relation to the growth of money incomes because of the progressive tax structures; and increasing reliance on employers' and workers' contributions to finance rising social security benefits.

We may now turn to consider the three forms of taxe in more detail.

Direct taxes on corporations

Direct taxes, on income and wealth, are in all countrie raised principally by taxes on households (including self employed). Direct taxes on corporations provide a relatively small share of total revenue — rarely more than 10 per cent. In most countries this share has been falling and the decline has been very marked in Finland, the Netherlands, Norway, Sweden and the United Kingdom (see Table 6.1).[10] Nevertheless, direct taxes on corporation are more significant in relation to corporate profits and savings. Taxes on corporations were higher in relation to the savings of corporations at the end than at the beginning of the period under review, in all countrie for which data are available except the United Kingdom n western Germany and (recently) in Finland, direct axes are substantially greater than net corporate savings i.e. retained net profits, after depreciation, taxes and listributions); and about as much goes in taxes as is vailable from retained net profits in Belgium and France see Table 6.2). In fact, in several of the countries for vhich data are available, the share of net corporate avings in gross domestic product was lower in 1962-1964 han it had been ten years before.

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[9] In no country has the ratio of direct taxes to GNP changed by more than about 1 per cent.

[10] Direct taxes on corporations are the major part of the fourt column in Table 6.1. Taxes paid on corporate interest and dividend received by households are treated as taxes on households, not a taxes on corporations.

The figures of net corporate savings must, however, oe read in conjunction with such estimates of depreciation or capital consumption as are available (shown in Table 6.2); because of the well-known difficulties in estimating capital consumption, the volume and the trends in *gross* profits are for some purposes (including comparisons with corporate taxes) more significant.[11]

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[11] Inter-country differences in Table 6.2 in the ratio of direct taxes on corporations to net savings of corporations probably reflect not only different tax rates but also different ways of estimating capital consumption. Unfortunately, only very few countries publish company accounts showing separately depreciation, net savings, dividends and taxes. According to a recent British investigation (*Report of the Committee on Turnover Taxation*, Cmnd. 2300, London 1964), actual average tax rates on corporate net profits, as assessed for tax, are only slightly higher in western Germany than in the United Kingdom. The big difference between the two countries in the ratio of corporate taxes to net savings of corporations may thus be partly explained by differing estimates of capital consumption.

TABLE 6.2

Share of gross property income in gross domestic product at factor cost[a]

Percentages

	Austria				Belgium				Denmark			
	1953-1955	1956-1958	1959-1961	1962-1964	1953-1955	1956-1958	1959-1961	1962-1964	1953-1955	1956-1958	1959-1961	1962-1964
1. Depreciation	10.3	9.7	9.9	10.7	9.4	9.8	9.9	9.7	7.0	7.7	7.7	7.9
of which :												
a Private and public corporations	2.1	2.1	2.3	2.5	..	..	..	..	..	..	..	..
2. Savings of corporations	4.1	3.9	4.5	3.6	2.3	2.1	2.2	1.9	..	..	..	..
3. Direct taxes on corporations	2.2	2.2	2.2	2.4	1.6	1.6	1.6	1.7	1.4	1.3	1.2	1.2
4. Rent, interest, dividends	0.0	0.0	0.5	0.8	9.9	9.6	8.8	7.5	..	..	..	..

	Finland[b]				France[c]				Western Germany			
1. Depreciation	6.9	8.5	10.1	9.9	9.4	8.7	8.8	9.0	8.6	8.5	8.9	9.9
of which :												
1a. Private and public corporations	..	4.8	6.2	6.1	..	..	5.6	5.9	..	..	..	..
2. Savings of corporations	4.9	3.1	3.4	2.3	2.2	2.3	3.0	2.2	1.9	1.9	2.0	1.2
3. Direct taxes on corporations	3.6	4.0	3.1	3.0	1.9	2.3	2.4	2.1	3.1	3.1	3.1	2.9
4. Rent, interest, dividends	6.6	7.8	8.4	8.9	3.8	3.3	3.2	3.3	..	..	..	..

	Ireland				Netherlands				Norway			
1. Depreciation	4.7	5.8	6.3	6.9	9.6	9.5	9.5	9.4	11.7	12.4	13.4	12.6
of which :												
1a. Private and public corporations	..	..	..	..	..	..	..	..	..	..	..	..
2. Savings of corporations	2.9	2.1	2.9	3.1	5.7	4.9	5.6	4.2	..	..	..	..
3. Direct taxes on corporations	2.0	1.9	1.5	2.1	3.7	3.6	3.2	2.7	3.5	2.9	2.1	1.6
4. Rent, interest, dividends	5.7	6.2	6.8	6.0	..	..	..	..	1.1	1.4	1.7	1.5

	Sweden[d]				Switzerland				United Kingdom			
1. Depreciation	..	..	..	..	8.5	8.6	9.5	9.8	7.6	7.8	7.6	7.7
of which :												
1a. Private and public corporations	..	..	..	..	..	..	..	..	4.3	4.5	4.6	4.9
2. Savings of corporations	8.1	8.4	9.1	5.2	4.7	5.3	5.0	4.5	5.6	5.1	5.7	5.1
3. Direct taxes on corporations	3.4	3.6	2.6	2.2	1.7	1.8	1.9	2.2	5.3	4.4	3.3	2.9
4. Rent, interest, dividends	8.3	8.1	7.8	7.7	7.5	7.5	7.3	6.8	3.4	3.3	4.4	4.9

Sources: United Nations, questionnaires on national accounts; United Nations, *Yearbook of National Accounts Statistics*, 1965; and national statistics.

[a] Gross profits exclude general government income from property.

[b] 1954-1955 (1953 not available).

[c] From 1959 onwards, new revised series.

[d] Savings of corporations include depreciation.

TABLE 6.3

Taxes on income in selected western European countries as percentage of personal primary income [a]

Percentages

Country and period	Personal income tax	Social security contributions	Total	Country and period	Personal income tax	Social security contributions	Total
Austria [b]				**Ireland** [b]			
1953-1955	13.6	7.6	21.2	1953-1955	3.9	1.3	5.2
1956-1958	12.0	8.5	20.5	1956-1958	3.9	1.3	5.3
1959-1961	11.9	9.0	20.8	1959-1961	4.1	1.5	5.6
1962-1964	13.3	10.1	23.4	1962-1964	4.7	2.0	6.8
Belgium				**Netherlands** [b]			
1953-1955	7.4	6.6	13.9	1953-1955	11.6	6.5	18.0
1956-1958	7.3	7.5	14.8	1956-1958	12.1	9.3	21.4
1959-1961	7.7	8.0	15.7	1959-1961	12.5	11.0	23.4
1962-1964	8.5	9.6	18.1	1962-1964	13.1	12.6	25.7
Denmark [c]				**Norway** [f]			
1953-1955	11.9	1.7	13.6	1953-1955	16.2	4.5	20.6
1956-1958	13.1	1.8	14.9	1956-1958	18.7	5.4	24.1
1959-1961	13.1	1.9	14.9	1959-1961	17.1	9.1	26.2
1962-1964	14.5	1.8	16.4	1962-1964	18.8	10.8	29.6
Finland				**Sweden** [bg]			
1953-1955 [d]	10.5	3.6	14.1	1953-1955	17.6	1.6	19.1
1956-1958	11.5	3.3	14.8	1956-1958	17.7	3.1	20.8
1959-1961	11.1	3.6	14.8	1959-1961	18.6	4.7	23.3
1962-1964	11.8	4.1	15.9	1962-1964	19.6	6.9	26.5
France [e]				**Switzerland** [b]			
1953-1955	4.4	14.8	19.2	1953-1955	8.2	5.4	13.5
1956-1958	4.7	15.3	20.0	1956-1958	8.3	5.4	13.7
1959-1961	5.4	16.3	21.7	1959-1961	8.5	5.9	14.4
1962-1964	5.5	18.3	23.8	1962-1964	9.1	6.2	15.3
Western Germany [b]				**United Kingdom**			
1953-1955	9.6	11.4	21.0	1953-1955	9.5	4.2	13.7
1956-1958	8.4	12.7	21.2	1956-1958	10.0	4.5	14.5
1959-1961	9.5	13.6	23.2	1959-1961	10.6	5.0	15.6
1962-1964	11.4	13.8	25.2	1962-1964	11.3	5.7	17.0

Sources: United Nations, *Yearbook of National Accounts Statistics*, 1965; United Nations questionnaires on national accounts; OECD, *General Statistics: National Accounts Statistics;* national statistics.

[a] Personal primary income = compensation of employees, income from unincorporated enterprises and other incomes from property.

[b] Personal primary income includes corporate transfer payments.

[c] Personal primary income includes corporate transfer payments and savings of corporations.

[d] 1954-1955.

[e] From 1958 onwards, new revised series.

[f] Income from unincorporated enterprises covers only agriculture, forestry, fisher
liberal professions and personal services.

[g] Income from unincorporated enterprises includes depreciation allowances.

There is no clear indication that gross corporate savings, in relation to gross national product, have been on a downward slope, except possibly in the Netherlands. But there is no evidence of marked increases either; since capital consumption requirements, however measured, must have been rising, and since the corporate share of output has generally been increasing, the data still suggest some difficulty in maintaining the proportion of income previously available for the self-financing of investment. But because of the inadequacy for most countries of the data about the size and allocation of gross corporate profits, such a conclusion cannot be firmly based.[12] At any rate, direct taxes on corporations would appear to have declined in most countries as a share
gross corporate savings. The fiscal instrument has be
used, with a certain success, to modify the squeeze
profits.

Households: direct taxes and social security contributio

The incidence of direct taxes on households, in tot
is shown in Table 6.3, where it is related to the inciden
of social security contributions (from both employ
and employed). Everywhere, except in Austria, the tax
proportion of primary household incomes has increas
over the decade; but the diversity is still very wide. T
highest incidence is in Norway and Sweden, where dir
taxes are on average nearly 20 per cent of primary hous
hold income. The incidence is extremely low — 5

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[12] A general review of the problems of self-financing of industrial investment is contained in the *Economic Survey of Europe in 1965*, Part 1, Chapter II, p. 84.

ent — in France and Ireland and probably also in Italy.[13] lsewhere it is of the order of 10-15 per cent. These ifferences, however, are to some extent offset by opposite ifferences in the incidence of social security contributions, hich are nearly 20 per cent of primary household income in France. In western Germany, Italy, the Netherands and Norway, the incidence of social security contributions is also relatively high; in the Netherlands and orway, moreover, this incidence has doubled over the ecade. Taking the two forms of tax together, the highly axed countries, where the combined incidence amounts o as much as 20 to 30 per cent of primary household ncome, are Austria, France, western Germany, the etherlands, Norway and Sweden. The relatively lowaxed countries (15-20 per cent) are Belgium, Denmark, inland, Switzerland and the United Kingdom. In reland, the combined incidence falls to 7 per cent.

he financing of social security

"Social security", in the broad sense used here, covers very large part of the redistribution process (though ot all, since it excludes education, housing subsidies, arm subsidies and some other elements which have a edistributive effect). Social security is financed by ontributions from employers, from employed persons or out of general taxation (the administrative distinction between specific government contributions to social insurance schemes and other forms of government financing is ignored here). In addition, certain other sources of finance may be of minor significance: in particular, interest received on the invested surpluses of social insurance funds. A comparative analysis is shown in Table 6.4 for 1960 — the latest year for which comparable data are available. The division of the cost of social security between the three major sources of financing is related to the general level of benefits. Benefits as a proportion of total primary household income are shown in the last column of Table 6.4.

A certain pattern emerges. Where benefits are high, as in Austria, Belgium, France, western Germany and Italy (in all these countries social benefits added, in 1960, 17 to 21 per cent to primary household income), the major source of finance was employers' contributions; these account for 40-60 per cent of the total cost.[14] Where benefits are relatively low, adding 14 per cent or less to household income, as in Denmark, Finland, Ireland, the Netherlands, Switzerland and the United Kingdom, social security is financed mainly by Government, with the exceptions of the Netherlands and Switzerland, where contributions by employers and workers played the biggest part.

The most direct incidence on household incomes arises from workers' contributions, including contributions paid by self-employed. As a proportion of primary household incomes, inter-country differences are

TABLE 6.4

Social security contributions and benefits in 1960

Percentages

Country	Financing of social security (Total receipts = 100)				Employees' contributions as a percentage of personal primary income	Social security benefits as a percentage of personal primary income
	Contributions		General govern-ment	Other sources		
	Employers	Employees				
ustria	50.5	24.4	20.6	4.5	5.3	18.8
elgium	41.5	18.5	31.4	8.7	3.6	17.2
enmark [a]	10.6	14.9	74.0	0.5	2.1	13.5
inland	36.7	9.0	47.6	6.7	1.2	12.1
rance	61.5	15.4	19.8	3.3	3.0	17.7
Vestern Germany	41.2	24.9	26.1	7.9	6.0	20.7
reland [a]	21.2	5.0	72.8	1.0	0.6	11.5
taly	59.0	11.9	23.0	6.1	2.4 *	16.5 *
Netherlands	39.2	40.3	12.7	7.7	7.1	14.0
Norway [a]	26.5	31.7	40.0	1.7	5.4	15.6
weden [b]	11.0	20.5	66.9	1.6	3.3	15.6
witzerland	23.8	32.9	27.4	16.0	4.3	9.2
nited Kingdom [c]	17.0	18.9	59.2	4.9	2.8	13.8

Sources: ILO, *The Cost of Social Security, 1958-1960*, Geneva 1964; United ations, *Yearbook of National Accounts Statistics*, 1965; and national statistics.

Fiscal year 1959/60.

[b] Personal primary income includes depreciation allowances of unincorporated enterprises.

[c] Fiscal year 1960/61.

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[13] Italy is not included in Table 6.3 because of the absence of fficial statistics on total household income and income taxes n households. According to rough secretariat estimates, the inidence of (A) all direct taxes (including those on corporations) and B) social security contributions on personal primary income were s follows in 1955 and 1964:

	A	B	Total
1955	7	10	17
1964	8	14	22

[14] It may be noted that these include countries where the self-employment sector is large and is covered by social security to a less extent than elsewhere.

TABLE 6.5

Share of selected items in indirect taxes in some western European countries in 1963

Percentages

	Austria	Belgium	Denmark[a]	France	Western Germany	Netherlands	Sweden[a]	United Kingdom
Taxes on petroleum products and motor-cars	10.2	14.9	14.2	13.1	11.7	4.1 [b]	17.3	18.7
Taxes on food and beverages	4.0	5.5	18.3	6.3	6.4	7.5	20.4	11.5
of which:								
Beverages	4.0	5.3	14.3	..	..	5.6	17.8	..
Taxes on tobacco	7.2	5.5	18.4	4.3 [c]	8.0	10.8	9.5	21.8
Customs duties	11.8	8.3	6.9	4.3	6.8	..	9.1	6.0
Turnover tax	36.6	52.7 [d]	—	5.3	38.8	42.2	—	—
Purchase tax	—	—	24.7	—	—	—	34.2	12.5
Tax on value added	—	—	—	44.6	—	—	—	—
Tax on industry and trade	10.2 [e]	—	—	9.5 [f]	17.2 [e]	—	6.5 [g]	—
Other indirect taxes	20.0	13.1	17.5 [h]	12.6	11.1	35.4 [i]	3.0	29.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Austria: *Bundesrechnungsabschluss der Republik Österreich,* 1963; *Gebarungsübersichten 1963 betreffend die Bundesländer, Gemeindeverbände und Gemeinden.* Belgium: *Annuaire Statistique de la Belgique,* Tome 84, p. 378, 390. Denmark: *Statsregnskab* 1963/64; *Statistiske Efterretninger,* No. 23 and No. 5 (Ejendomsskatter), 1965. France: *Statistiques et Études financières,* June 1965. Western Germany: *Statistisches Jahrbuch für die Bundesrepublik Deutschland,* 1965, pp. 348 and 450; OECD, *General Statistics Bulletin,* January 1965. Netherlands: *National rekeningen* 1963, p. 83. Sweden: *Budget-redovisning för budgettåret 1963/64.* United Kingdom: *Report on Customs and Excise 1963/64,* Cmnd. 2539; *Finance Accounts of the United Kingdom,* 1963/64; *National Income and Expenditure 1964.*

NOTE.—All taxes refer to general government, except in Sweden where only taxes received by central government are recorded.

[a] Fiscal year 1963/64.

[b] Tax on motor-cars only.

[c] Taxes on tobacco and matches (state monopoly).

[d] *Droits de timbre et taxes assimilées,* which include all taxes on transfers.

[e] "Gewerbesteuer" and "Lohnsummensteuer".

[f] Tax on wage bill ("versement forfaitaire").

[g] Tax on energy.

[h] Of which taxes on land and building (Ejendomsskatter) 12.2.

[i] Including custom duties and taxes on petroleum products.

[j] Of which local rates (24.8), based on the annual income derived from (or imputed t ownership of land and building.

relatively small. Workers' contributions exceed 5 per cent of primary household income in only a few countries: Austria, western Germany, the Netherlands and Norway. These are among the countries (along with Sweden and Switzerland) where employees' contributions pay for a relatively high share of the total cost of social security — 20 per cent or more, rising to 40 per cent in the Netherlands. Elsewhere, the employees' direct share of the cost is under 20 per cent, falling to 12 per cent in Italy and less in Finland and Ireland.

A number of reasons can be found why the more generous scales of social security have been financed predominantly by employers. Not only are there administrative conveniences, but also it may have appeared that such contributions would have their impact either on profits or on wages, or would have a less inflationary impact than corresponding wage increases. Moreover, social resistance might have been feared to the direct imposition of a large contribution on workers. In the circumstances of recent years, it must be assumed that in fact the greater part of the employers' contributions has been shifted forward on to prices. However, the situation may be changing. There are misgivings in a number of countries at present about the direct cost to industry of social security schemes, and fears are expressed about the incidence of employers' contributions on profits and investments. It seems plausible to assume that, in present and prospective conditions of open international competition, it may be more difficult for enterprises to shift them on to prices than in the past. If the alternative to employer-financing were government-financing through a further general rise in indirect taxes, the economi effects on income distribution would not necessaril be very different. On the other hand, a shift from employers' contributions to higher income-taxes on households would normally result in a larger amount of vertica redistribution.

Indirect taxes

Differences in the structure of indirect tax systems ar considerable and, through their effect on relative price can play an important part in the redistribution proces Broadly speaking, two main systems may be detected a "concentrated" structure, typified by the Britis system where taxes are concentrated on final goods an especially on certain specific items such as drink an tobacco; and a "diffused" structure typified by the we German or French systems, where the central pillar is general turnover tax (western Germany) or value-adde tax (France) imposed at all stages of production or sal Of the countries for which some data on the compositio of tax receipts are available (shown in Table 6.5), Austri Belgium and the Netherlands follow the "diffused pattern (Italy also belongs to this group). Denmark an Sweden, with their high taxes on drink and tobacc occupy an intermediate position. The incidence of completely "diffused" system may be more or less pr portional to household expenditure.[15] The incidence of

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[15] The incidence of an indirect tax may be related to househo expenditure or to household disposable income or to household pr mary income. If its incidence is proportional in terms of expenditu

ndirect taxes and subsidies as percentage of GNP at market prices

1962-1964

	Taxes	*Subsidies*	*Net taxes*
Austria	15.6	2.1	13.5
Belgium	12.2	1.0	11.2
Denmark	13.9	1.0	12.9
Finland	13.2	3.3	9.9
France	17.7	2.1	15.6
Western Germany	14.3	0.9	13.4
Ireland	16.5	3.5	13.0
Italy	13.6	1.5	12.1
Netherlands	10.1	0.8	9.3
Norway	14.4	4.1	10.3
Sweden	12.6	1.1	11.5
Switzerland	7.3	1.0	6.3
United Kingdom	13.6	1.6	12.0

Sources: United Nations, *Yearbook of National Accounts Statistics*, and questionnaires.

concentrated" system will depend on whether taxes are oncentrated on items with high or low cross-section ncome elasticities. Thus, high taxes on motor-cars and ome consumer durables, as in the British system, tend o have a certain progressive effect on distribution. High taxes on drink and tobacco, as in the British, Danish and Swedish systems, although originally intended n part as "luxury" taxes, either have a negligible effect since the income elasticities are generally below unity) r are actually regressive.[16]

Subsidies related to expenditure can conveniently be onsidered together with indirect taxes. The table bove shows indirect taxes and subsidies in total as roportions of gross national product.

The major subsidies are agricultural subsidies in various forms and may be regarded both as subsidies to farmers (partly, as in Ireland and Finland, for stimulating export production) and as subsidies to consumers. From both points of view, they have a certain redistributive effect, because of the generally lower incomes of farmers and the low income elasticity of demand for food.[17] In addition to agricultural subsidies, the figures include in most countries various forms of housing subsidies.

Government expenditure and income redistribution

We now turn to the incidence of government expenditure on redistribution. From this point of view, government expenditure may be divided into four kinds.

(*a*) Financial transfers to households (and private non-profit institutions).

(*b*) Government expenditure on goods and services directly benefiting the household sector — which may be described as "collective consumption"; because of absence of information, it has been possible to isolate only expenditure for health and education.

(*c*) Financial transfers (subsidies) directly to enterprises; although the effects of these may be to increase profits rather than to reduce prices, the big items are agricultural subsidies and housing subsidies, which are regarded here as benefiting households. Thus, all expenditure classified as subsidies is included as a transfer to

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t will be (if only slightly) regressive in terms of disposable income because the savings ratio rises with income) and still more regressive n terms of primary income (which is more unevenly distributed han disposable income).

[16] See below.

[17] The element of consumer subsidy in agricultural support is always doubtful. Thus, in the British system, the effect on consumer prices may be said to be negligible since the support prices to farmers are supposed to be equivalent to "world prices". Where agricultural support keeps farm prices above the "world" level, e.g. through import levies, the effect of the import levies is regressive; but this effect may be partly offset by production subsidies.

TABLE 6.6

Current and capital expenditure (combined) of the general government by main purposes, in selected western European countries

Percentages

	Belgium	France	Western Germany	Italy	Netherlands	Austria	Denmark	Norway	United Kingdom
	1959					1962	1965-1966*	1965*	1965
dministration, etc.	10.2	9.1	8.9	12.0	9.7	8.5	.. [c]	8.6	5.9
efence	10.5	16.8	10.5	7.7	10.2	2.4	10.1	10.3	15.1
ransport and communications	9.8	7.6	7.5	6.8	8.8	8.5	6.0	7.7	7.2
griculture and foodstuffs	1.5	2.1	3.8	3.9	4.4	3.3	2.5	16.0	2.4
ndustry and services	1.6	6.4	2.6	2.0	3.5	2.5	.. [c]		7.2
ducation, research	12.6	9.9	9.4	9.0	13.1	6.9	16.0	14.2	12.6
ealth and welfare	34.9	5.8	6.8	6.7	4.8	8.9	15.9	12.9	10.7
ensions and allied items [a]		27.0	31.0	31.0	24.6	31.5	23.7	17.9	17.4
ousing	1.3	5.2	5.2	1.1	8.5	4.5	. [c]	.. [c]	6.6
thers [b]	17.6	10.2	14.3	19.8	12.4	23.0	25.8	12.4	15.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources and methods: Figures for the Common Market countries in 1959 have been erived from the EEC study: *Les recettes et les dépenses des administrations publiques ans les pays membres de la CEE*, Série économie et finances, 2, Brussels 1964; Austria: gures submitted by the Central Statistical Office; Denmark: *Economic Survey 1965*, able IX; Norway: *Economic Survey 1965*, Tables 91, 92 and 94; United Kingdom: ational income and expenditure 1966, Central Statistical Office, Table 53.

[a] Sickness, invalidity and old-age pensions; family and children's allowances, unemployment benefits, public assistance (excluding medical care).

[b] Includes interest on internal debt and internal debt amortization.

[c] This item cannot be identified and is therefore included with "Others".

TABLE 6.7

Shares in current internal expenditure of general government by functional classification in selected western European countries

Percentages

	Austria		Denmark		Finland		France		Western Germany		Netherlands		Norway		Sweden		United Kingdom	
	1956	1964	1956	1964	1954	1964	1953	1964	1953	1964	1953	1964	1953	1964	1953	1963	1953	1964
A. Redistribution expenditure																		
Current expenditure on goods and services																		
"Collective consumption"																		
Education	8.2	8.7	10.5	13.4	16.7	17.9	..	..	6.9	7.4	11.2	15.0	9.6	12.8*	13.3	13.8	6.8	11.1
Health	13.3	12.4	8.6	11.6	7.4	9.5	..	..	9.0	10.7	6.4*	6.1*	3.8	5.8*	10.4	10.8	10.3	11.6
Total	21.6	21.1	19.2	25.1	24.2	27.4	7.8[a]	9.4[a]	15.8	18.1	17.6	21.1	13.5	18.6*	23.7	24.5	17.1	22.8
Current transfers																		
Transfers to households	39.7	41.6	31.9	32.5	29.5	26.5	40.8	49.8	44.1	43.6	30.1	40.4	24.3	33.8	24.9	30.7	19.3	24.5
of which :																		
Education	0.3	0.5	2.0	3.3	..	..	..	..	0.3	0.3	0.1	0.2	..	..	..	..	1.2	2.2
Health	2.7	2.2	3.6	5.6	..	..	..	..	2.7	3.9	8.6	10.5	..	..	..	..	1.9	2.4
Subsidies to enterprises	7.1	7.2	1.2	3.8	11.0	13.4	3.9	6.3	0.8	2.9	1.6	2.8	21.8	14.0	4.0	3.8	7.0	5.4
Total	46.9	48.8	33.1	36.3	40.5	39.9	44.7	56.1	44.9	46.5	31.7	43.3	46.1	47.8	28.9	34.5	26.3	29.9
Total of A.	68.4	69.9	52.2	61.4	64.7	67.3	52.5	65.5	60.7	64.7	49.3	64.4	59.6	66.4	52.6	59.0	43.4	52.7
B. Other expenditure																		
Current expenditure on goods and services																		
"Social costs"	29.7	27.2	41.2	34.9	30.9	29.3	44.0	31.3	37.4	33.3	39.4	27.7	37.0	29.2	42.7	36.2	43.4	34.2
of which :																		
Defence	3.7	5.5	13.9	11.7	6.4	7.6	25.9	13.5	16.0	13.3	22.5	..	19.5	11.6	20.2	15.1	31.2	20.3
Current transfers																		
Interest on public debt	1.8	2.8	6.5	3.8	4.4	3.3	3.5	3.2	1.8	2.0	11.3	7.9	3.4	4.4	4.8	4.8	13.2	13.1
Total of B.	31.6	30.1	47.8	38.6	35.3	32.7	47.5	34.5	39.3	35.3	50.7	35.6	40.4	33.6	47.4	41.0	56.6	47.3
Grand total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Current internal expenditure as a percentage of gross national product at market prices	24.8	28.9	21.4	24.2	19.7	24.4	30.2	32.7	27.2	29.1	24.4	31.1	24.5	28.9	25.1	30.8	30.5	29.3
of which :																		
Redistributive expenditure	17.0	20.2	11.2	14.9	12.7	16.4	15.9	21.4	16.5	18.8	12.0	20.0	14.6	19.2	13.2	18.2	13.2	15.4

ouseholds, except — when it can be identified — expen- ture for specific purposes (e.g. export promotion) with o immediate redistributive effect.

(*d*) All other expenditure — for defence, general admi- istration, etc. — of which the distributional effects annot be identified.

The first three categories of expenditure are therefore eated, if somewhat arbitrarily, as redistribution of comes in favour of households.

For a detailed analysis of the incidence of government xpenditure, it would be necessary to have information lassifying government expenditure both by its purpose nd by its economic category (transfers, purchases of oods and services, subsidies, current and capital expen- iture). This type of presentation is not generally available. able 6.6, therefore, presents as general background uch figures as can be obtained — in some cases not ery recent — for total government current and capital xpenditure by *purpose*. This is followed (Table 6.7) by classification under *economic categories*, separating edistributive expenditure (*a*) to (*c*) above from the rest; ut this, too, is not available for all countries and is also, or lack of data, restricted to current expenditure. Few ountries have so far applied the standard national ccounting system to government expenditure in sufficient etail to permit anything like a comparative analysis f its redistributive implications.[18]

Expenditure for "redistributive" purposes — as de- ned above and taken to be roughly equivalent to expen- iture on health and welfare, education, housing, and on ocial services (mainly transfers) — amounts to 40-50 per ent of total expenditure, the largest item being social ervices. Social services and health and welfare expen- litures are broadly what was described above as "social ecurity".

The major items of expenditure without clear redistri- outive implications are general administration and lefence. General administration amounts to around one- enth of total expenditure in most countries, being highest n Italy.[19] Defence reaches its highest proportions in he United Kingdom and France.

A more detailed and up-to-date analysis, relating to urrent expenditure only, is shown in Table 6.7 for everal countries. Total current government expenditure aries between 20 and 30 per cent of gross national roduct — a somewhat lower proportion in most coun- ries than that shown in Table 6.1 for total tax revenue of which the proportion was generally 25-35 per cent). The difference arises because part of tax receipts — government saving in the national accounts — goes to cover capital expenditure.[20]

Current expenditure described as "redistributive" represents between 50 and 70 per cent of total current expenditure. These "welfare state" functions reach their highest proportion of total expenditure in Austria and Finland, and their smallest proportion in the United Kingdom. (The relatively low proportion in the United Kingdom — just over 50 per cent — is partly attributable to the high proportion of the Government budget spent on defence and partly also to the exceptionally high proportion devoted to debt interest, a reflection of the slower rate of inflation.) In all the countries shown, the proportion of redistributive expenditure has risen over the decade.

Of the redistributive services themselves, "collective consumption" (in the sense of direct government provision of goods and services for education and health) represents about 20 to 25 per cent of total current government expenditure in all the countries shown. In three countries — Denmark, Finland[21] and the United Kingdom — the expenditure on collective consumption is not very different from that on financial transfers. Elsewhere, the financial transfers are far more important. Partly this is the result of different administrative arrangements; for example, in the Netherlands, the rather low figure for direct health expenditure is offset by a very high figure for transfers for health purposes. But the main reason, as has been shown above in the discussion of social security benefits, is the higher scale of social security provision (and contributions), notably in Austria, France and western Germany among the countries featuring in Table 6.7.

The results of the redistributive function of government on the incomes of the household sector as a whole are summarized in Table 6.8. In each of these countries, primary incomes from work or property, after direct taxes and social security contributions, constitute 70 to 80 per cent of the final income of households, and this proportion has generally declined. In 1964, collective consumption represented a remarkably uniform proportion — from 7½ to 10 per cent, being greatest in Sweden. The share of transfer incomes varied more widely: from over 16 per cent in France, Austria, western Germany and the Netherlands, to under 10 per cent in Denmark, Finland and the United Kingdom.

Analysis of social security benefits

An analysis of the different kinds of benefits under social security will be found in Table 6.9. Nineteen-sixty

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[18] The only western European country providing regular data of overnment expenditure cross-classified by purpose and economic ategory is the United Kingdom. For several countries the data in ables 6.6 and 6.7 have been compiled from national sources and here is necessarily much uncertainty about their comparability. n particular, there is a good deal of uncertainty about how far eceipts by government from fees, etc., have been deducted from gross xpenditure.

[19] The proportions shown, however, necessarily depend on how ar general administrative expenses can be separated from the pecific services.

[20] The ratio of gross government savings to current government expenditure was as follows in the countries covered by Table 6.7 on the average of 1962-1964:

Austria	30.4	Netherlands	20.7
Denmark	22.5	Norway	23.7
Finland	36.5	Sweden	32.3
France	11.5	United Kingdom	8.9
Western Germany	26.3		

[21] The very high level of expenditure on education in Finland appears to be due not so much to high expenditure per pupil as to the large proportion of young people in the population.

TABLE 6.8

The structure of households' final income in selected western European countries

Percentages

	Austria		Denmark		Finland		France		Western Germany		Netherlands		Norway		Sweden		United Kingdom	
	1956	1964	1956	1964	1954	1964	1953	1964	1953	1964	1953	1964	1953	1964	1953	1963	1953	1964
Income from employment	63.1	66.3	58.5	61.4	62.4	63.4	59.2	64.0	64.0	68.9	62.6	70.1	64.0	71.4	76.7	83.6	75.0	77.3
Income from unincorporated enterprises	33.0	29.1	42.2 [a]	36.7 [a]	24.7	19.7	32.1	25.6	34.5	30.1	41.0	31.2	31.3*	25.4*	14.6	9.4	10.9	7.8
Income from property	0.6				9.8	12.9	6.6	5.7					2.3	3.7	12.2	12.4	9.7	11.3
Total primary income	96.7	95.4	100.7	98.1	96.9	95.9	97.8	95.3	98.5	99.0	103.6	101.3	97.6	100.5	103.5	105.4	95.5	96.5
Less:																		
Direct taxes	19.4	22.8	14.3	16.6	13.5	16.8	19.1	23.8	21.7	25.0	20.3	27.3	16.2	25.9	19.3	27.9	12.9	16.4
Primary income after taxes	77.3	72.5	86.4	81.5	83.4	79.1	78.8	71.6	76.8	74.0	83.2	74.0	81.4*	74.5*	84.2	77.6	82.6	80.2
Net current transfers from general government	13.2	16.3	8.1	9.6	7.2	7.9	17.3	21.7	16.8	17.4	9.9	16.1	6.9	12.2	6.7	10.9	7.6	9.1
Subsidies	2.4	2.8	0.3	1.2	2.9	4.3	1.7	2.7	0.3	1.2	0.6	1.2	7.3	5.7	1.3	1.5	2.8	2.1
Collective consumption	7.2	8.3	5.2	7.7	6.4	8.7	2.2*	4.0*	6.1	7.4	6.3	8.8	4.5*	7.6*	7.7	10.0	6.9	8.7
Total	100	100	100 [a]	100 [a]	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Sources: Replies to United Nations questionnaires on national accounts; and national statistics.

[a] Including savings of corporations.

TABLE 6.9

The structure of social security benefits in western European countries, 1960

Percentages

Country	Health and welfare [a]	Employment injuries	Family allowances [b]	Unemployment	Pensions [c]	War victims
Austria	23.2	2.8	12.4	3.7	51.8	6.1
Belgium	35.1	4.6	17.6	7.1	29.8	5.8
Denmark	36.2	3.1	5.8	4.6	49.9	0.4
Finland	34.7	3.2	17.5	0.1	39.0	5.5
France	24.8	5.4	28.6	0.2	33.0	8.0
Western Germany	27.6	3.6	3.1	1.5	55.7	8.5
Ireland	38	2	13	8	39	—
Italy	19.1	3.0	18.8	—— 50.1 ——		9.0
Netherlands	29.6	2.5	18.0	1.6	47.4	0.9
Norway	42.4	2.9	8.5	2.6	42.3	1.3
Sweden	42.7	1.1	14.1	1.3	40.6	0.2
Switzerland	47.2	8.3	0.7 [d]	0.3	43.5	—
United Kingdom	49.7	1.9	5.2	1.3	38.3	3.6
Canada	30.3	3.7	16.9	13.2	27.6	8.3
United States	21.6	4.6	—	9.5	48.9	15.4

Sources: ILO, *The Cost of Social Security 1958-1960*, Geneva 1964.

[a] Including sickness insurance, public health, public assistance, school meals.

[b] Includes household help, mothers' pensions, rent allowances.

[c] Old-age, invalidity and survivors' pensions, including old-age homes and pensioners' homes.

[d] Only federal family allowances are included.

is the latest date for which such figures are generally available.[22] Pensions (taking invalidity, old-age and survivors' pensions) and health expenditures are the two major items in every country: pensions take the biggest share (half or more of the total) in Austria, Denmark and western Germany; health expenditures are biggest (nearly half) in Switzerland and the United Kingdom. Family allowances show much more variation. They reach their biggest proportion — over a quarter of total expenditure — in France,[23] they are an important element in Belgium, Finland, Italy and the Netherlands. They are of quite small importance in Denmark, western Germany, Norway, Switzerland and the United Kingdom.

It is impossible to enter here into a discussion of the various systems of social security,[24] but attention must be called to two major differentiating characteristics. The first is the distinction between differential and uniform (flat-rate) benefits (associated with a similar distinction in the basis of contributions). In most countries, benefits and contributions, especially for old age and sickness, and more often for unemployment, are related to actual pay, and provisions exist for automatic increases in benefits with rises in the cost of living and/or in national income. The major exception is the United Kingdom, where the flat-rate system still holds (although now modified by supplementary schemes which are wage-related) and where legislation is required for changes in the rates of benefits or contributions.[25] For some purposes, the Scandinavian countries, too, operate a minimum flat-rate system with a supplementary wage-related scheme. One consequence of a flat-rate system is that the scale of contributions must be related to the capacity to pay of the lower-paid wage-earners. To the extent that benefits are related to contributions, it follows that the benefits cannot be generous in relation to the normal earnings of most wage-earners. It is true that in these countries government participation in financing social security is quite considerable; yet the average level of benefits tends to remain lower in the Scandinavian countries and the United Kingdom than in the other western European countries in relation to primary income.

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[22] Since a breakdown of current transfers to households by purpose is available for very few countries, recourse is had to the pattern of social security benefits in 1960, as shown by the International Labour Office in its publication *The Cost of Social Security 1957-1960*, Geneva 1964. Social security benefits include, broadly speaking, current transfers to households plus benefits in kind for health purposes.

[23] This is not because the scale of other social security benefits in France is relatively low. The whole level of social benefits in France, in relation to household income, is among the highest in western Europe. (See Table 6.4.)

[24] A detailed description of the social security schemes in the countries of the European Economic Community is contained in the publication *Tableaux comparatifs des régimes de sécurité sociale applicables dans les États membres des Communautés européennes* (3rd edition), Brussels, July 1964. For a rapid review of the various social security schemes in a number of western European countries, see M. F. W. Hemming, "Social Security in Britain and certain other countries" in *National Institute Economic Review*, August 1965. A fuller account of the incidence of social security on various types of household for four countries (Austria, France, western Germany and the United Kingdom) will be found on page 35 of this chapter.

[25] It seems probable that the United Kingdom is moving towards a more comprehensive wage-related system.

A second differentiating factor is the treatment of the self-employed. In the countries where benefits are closely linked to specific contributions from employers and employed (France, western Germany, Italy, Belgium, Austria), there is a fundamental difference between the protection enjoyed by the employed and the self-employed. Some differences in the treatment of these two groups are inevitable. For instance, the concept of unemployment is currently applied to wage- and salary-earners only and it is not surprising if self-employed do not enjoy unemployment benefits. But unemployment benefits are only a modest part of all the social benefits. The employed and self-employed are treated in a different way also in respect of the two major groups of social benefits, that is, medical care and pensions.[26] For instance, in France in 1962 the self-employed were virtually excluded from maternity benefits and sickness insurance while pensions benefited only the self-employed in agriculture but not in other sectors. In that year, total social benefits accounted for 23 per cent of total disposable income of wage-earners, and for no more than 6 per cent and 4 per cent respectively for farmers and liberal professions.[27]

6.2 HOUSEHOLD INCOME DISTRIBUTION AND REDISTRIBUTION, BY SIZE OF INCOME

The previous section gave a broad picture of the size and the structure of the major redistributive flows between sectors. An attempt is now made to show how the dispersion by income size of personal income is affected by taxation and benefits, and to see the relationships between the total amount of redistribution, as displayed above, and the change in inequality of incomes.

The starting point is the pre-tax incomes of the household sector broken down by income size. Where possible, wage and salary incomes have been similarly analysed. The first part of the section briefly reviews the major changes in the distribution of pre-tax income for the household sector as a whole, and for wage- and salary-earners in particular, over the last ten years or so. Then, an effort is made to measure the amount of taxes falling on each income group and the benefits received.

The investigations attempted in this section are fraught with a variety of well-known statistical deficiencies and conceptual uncertainties. For instance, the allocation of taxes and benefits among income groups implies some answer to the problem of the final incidence of taxes and benefits (including taxes on intermediate products and subsidies to enterprises).[28] The statistical material, in turn, is not only incomplete but also heterogeneous and does not lend itself to inter-country comparisons without severe qualifications. In this field there has so far been hardly any attempt towards international unification of methodologies and forms of presentation, as there has been, for example, in the field of national accounts. These difficulties have restricted the country coverage and the possibility of inter-temporal and inter-country comparisons as well. In addition, it must be noted that several of the sources used, especially those derived from tax assessments, suffer from incomplete recording in the lowest income groups.

It would have been preferable to start the present analysis from the primary income of the household sector (that is income from employment, self-employment and property) and to regroup the income receivers on a family basis, arranged by income size. In fact, lack of statistics prevented the general use of both these concepts. The statistical income unit is the taxpayer and not the family in all countries except France. The income concept used is the "pre-tax income of taxpayers" and therefore generally includes taxable transfer payments.

Pre-tax income distribution

An earlier secretariat study examined the major changes in income distributions between the pre-war and postwar periods for a number of western European countries.[29] It was shown there that there had been a general (though not very strong) tendency towards a reduction in inequality; of the five countries examined, the movement was more evident in western Germany, Sweden and Denmark than in the Netherlands or the United Kingdom. It was also shown that the tendency towards more equality continued in the later nineteen-forties and early nineteen-fifties, largely through a deterioration in the relative position of people in the top decile group.

The size distribution of before-tax incomes for the early or mid-1950s and for the latest year available is shown in Table 6.10 and in Chart 6.1, for eight western European countries.[30] The changes over the last decade

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[26] It has to be remembered that the situation described in the text applies to 1960-1962. Since then, the mechanism of the social security schemes has continued to evolve in all western European countries; and one feature of the recent developments has been its enlargement outside the field of wage- and salary-earners. But the two categories are still covered in an uneven way in most countries.

[27] See "Les ressources des ménages par catégorie socio-professionnelle" in *Études et conjoncture*, July 1966, p. 78.

[28] Detailed family budgets and input-output tables are useful prerequisites for investigations of this kind, but they cannot solve entirely the problem at issue. Input-output tables, for instance, allocate all indirect taxes among the items of final expenditure (private and public consumption, investments, exports), but they say nothing about their final incidence on consumer prices or on profits.

[29] See "The Distribution of Personal Income by Size" in the *Economic Survey of Europe in 1956*, Chapter IX, Geneva 1957. The study also included a discussion of various methodological and statistical points.

[30] Table 6.10 brings up to date the data contained (for five countries) in Table 3 of Chapter IX of the 1956 SURVEY *(op. cit.)*. The data, when not otherwise specified, refer to yearly income and include male and female, part-time and full-time workers. The statistical unit, as mentioned in the text, is the taxpayer and not the family (which may include more than one taxpayer) except in France. In all countries except Sweden, the incomes of husband and wife are considered as one income. The figures for Denmark relate to incomes *after tax* (no pre-tax figures being available). They are included here for information, but are not to be regarded as comparable with the figures for other countries.

TABLE 6.10

Percentage distribution of personal income before tax[a] by decile[b] and percentile groups

	United Kingdom		Western Germany			Netherlands		Denmark		Norway		Sweden		France		Finland	
	1954	1964	1955	1960	1964	1952	1962	1953	1963	1957	1963	1954	1963	1956	1962	1952	1962
Decile groups																	
1	5.5	2.0	1.7	2.0	2.1	1.3	1.3	1.4	1.7	1.1	1.0	2.0	1.6	0.7	0.5	1.0	0.5
2		3.1	2.9	3.0	3.2	2.9	2.7	3.2	3.3	3.4	3.5	3.6	2.8	2.2	1.4	3.1	1.9
3	4.5	4.2	3.9	4.4	4.7	4.1	4.2	4.4	4.7	4.6	5.3	5.0	4.1	3.3	2.9	4.8	3.5
4	5.8	6.0	5.0	5.6	5.4	5.7	5.8	5.8	6.1	6.3	6.8	6.2	5.5	5.4	4.7	5.9	5.2
5	7.3	7.5	5.9	5.9	6.5	7.0	7.4	7.8	7.7	7.9	8.5	7.8	7.7	6.8	6.4	7.2	6.8
6	8.6	9.1	7.1	7.1	7.2	8.4	8.6	9.1	9.1	9.7	10.0	9.3	9.7	7.8	7.6	9.0	8.6
7	10.4	11.0	8.3	8.0	8.4	10.6	10.0	10.8	10.9	11.0	11.3	10.6	11.4	10.3	10.3	10.7	11.1
8	12.7	12.9	9.2	9.0	9.6	11.7	11.6	13.3	13.3	13.0	13.1	12.7	13.2	12.4	12.5	13.0	13.1
9	14.8	14.9	12.0	11.5	11.5	14.3	14.6	16.2	16.1	15.4	15.6	15.5	16.1	17.0	16.9	16.4	16.8
10	30.4	29.3	44.0	43.5	41.4	35.0	33.8	28.0	27.1	27.6	24.9	27.3	27.9	34.1	36.8	28.9	32.5
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Percentile groups																	
90-92.5	4.4	4.7	3.6	3.7	3.7	4.2	4.8	5.0	4.9	4.7	4.9	5.0	4.9	5.2	5.6	5.2	5.5
92.5-95	5.0	5.4	4.2	4.1	4.0	5.8	5.4	5.0	5.3	5.0	4.6	5.3	5.4	6.5	6.2	5.7	6.0
95-97.5	6.1	6.2	5.6	5.4	5.7	7.0	6.6	6.3	5.9	6.1	6.1	6.1	6.5	7.5	8.0	6.1	7.1
97.5-98.75	4.4	4.0	4.2	4.2	4.8	5.0	5.0	3.6	4.0	3.8	3.3	4.1	4.1	4.9	6.0	3.9	4.7
98.75-100	10.5	9.0	26.4	26.1	23.2	13.0	12.0	8.1	7.0	8.0	6.0	6.8	7.0	10.0	11.0	8.0	9.2
Total	30.4	29.3	44.0	43.5	41.4	35.0	33.0	28.0	27.1	27.6	24.9	27.3	27.9	34.1	36.8	28.9	32.5
Inequality coefficient	0.40	0.40	0.51	0.49	0.47	0.45	0.44	0.40	0.39	0.40	0.36	0.38	0.40	0.48	0.52	0.41	0.47
Maximum equalization percentage[c]	29	28	36	35	33	31	30	28	27	27	25	26	29	34	37	29	33

Sources:

Denmark	1953 *Indkomst og formueansaettelserne til Staten for skatteåret 1954/55;* 1963 *Statistiske Efterretninger*, 1966, pp. 278-279.
Finland	1952 *Statistical Yearbook 1955*, p. 248; 1962 *Statistical Yearbook 1965*, p. 256.
France	1956 *Études et Conjoncture*, June 1963 p. 436, Table 9 (after elimination of zero incomes) and Table 11, p. 437; 1962 *Études et Conjoncture*, December 1965, p. 31, Table 27, page 40, Table 31.
Western Germany	Data provided, before publication, by Professor G. Göseke, Deutsches Institut für Wirtschaftsforschung, Berlin.
Netherlands	1952 *Inkomensverdeling 1952 en vermogensverdeling 1953*, pp. 28-29; 1962 Direct communication from the CBS, September 1966.
Norway	1957 *Skattestatistikk for inntektsårene 1956 og 1957*, p. 36; 1963 *Skattestatistikk inntektsåret 1963*, p. 30.
Sweden	1954 The Survey, 1956. 1963 *Skattetaxeringarna, taxeringsåret 1966*, pp. 24-25.
United Kingdom	1954 *National income and expenditure*, 1960 p. 20; 1964 *National income and expenditure*, 1966, p. 33.

[a] Total personal income for the United Kingdom, western Germany, Netherlands and France. Assessed income for the Scandinavian countries. Data for western Germany provided, before publication, by Professor G. Göseke, Deutsches Institut für Wirtschaftsforschung, Berlin. The figures include undistributed profits of corporations. Data for Denmark refer to "after-tax" income.

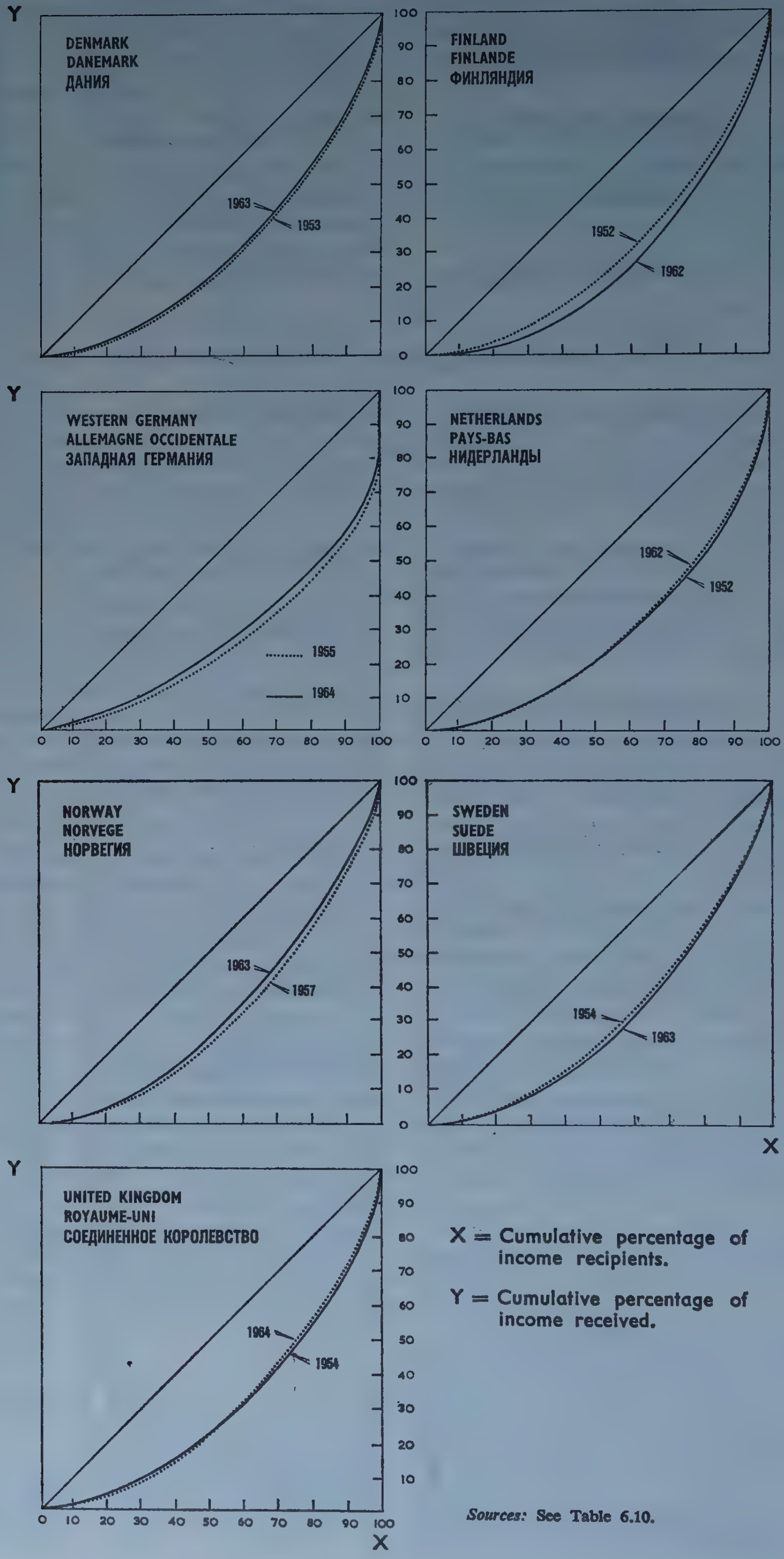
[b] Calculated by reference to the number of taxpayers, except for France where the unit is the household.

[c] The maximum equalization percentage shows the share of income to be transferred from high to low income ranges in order to obtain equal distribution. It corresponds to the maximum vertical distance between the Lorenz curve and the diagonal representing equal distribution.

CHART 6.1

Distribution of household income before tax

Lorenz curves



X = Cumulative percentage of income recipients.

Y = Cumulative percentage of income received.

Sources: See Table 6.10.

or so are less uniform than those which took place between 1939 and the early 1050s. Over more recent years income dispersion for the household sector as a whole has widened in some countries and narrowed in others, while in a third group such (small) changes as have occurred among the various income groups have tended to offset each other. The first group of countries (experiencing a widening in income dispersion) includes Finland, Sweden and France.[31] In all three countries the share of total income received by persons in higher income groups rose while the share of those in lower income groups declined. In Sweden the watershed falls between the fifth and the sixth decile groups, in Finland between the sixth and the seventh, while in France it is in the seventh decile. Finland shows the most marked widening in income dispersion. All three countries show a notable fall in the relative incomes of the poorest groups.

A clear tendency towards a reduction in income inequality, displayed at both ends of the scale, appears only in Norway. Data for western Germany are difficult to interpret since undistributed profits of private companies are included,[32] and the reduction in inequality shown in Table 6.10 between 1960 and 1964 may largely reflect the reduced margin of profits of corporations between the two years. The change in income dispersion among wage- and salary-earners shown in Table 6.13 (and such estimates as can be made for company profits) suggests that the tendency towards a reduction in income inequality — well-pronounced between pre-war and the early 1950s — became weaker in the later 1950s and practically ceased in the early 1960s. Western Germany is thus no exception to the prevailing tendency: the forces narrowing the income dispersion appear to be weakening.

The reduction in income dispersion has been very modest in the United Kingdom, the Netherlands and Denmark (after tax). These countries, like western Germany and Norway, show one common feature: a fall in the income share of the top decile group mainly borne by the top percentile groups. At the other end of the scale, experience has varied. In the United Kingdom, the share of income absorbed by the three lowest decile groups has declined, the middle decile groups being the net gainers. In the Netherlands, the lowest decile group kept its relative position but there was a worsening in the second lowest group. In Norway, there was no significant change. But in western Germany and Denmark (after tax) the relative income share of the lowest groups was somewhat improved.

Though not much can be read into small changes over a relatively short period, the impression remains that the income gap between people in low income groups (where non-active persons such as pensioners account for a high share of total numbers and total income) and people in middle income groups has increased in several countries; the poor have become poorer in relation to the middle groups, whether the rich have become, by the same measure, richer or not.

It may be of some interest to measure income dispersion also on a quartile basis (Table 6.11) (a similar analysis for the centrally planned economies will be found in Chapter 8, page 41). The quartile ratios for the total household sector (part A of Table 6.11) supplement the indications given by the "Gini coefficients" and by the "maximum equalization percentages" reported in Table 6.10. Both types of measure indicate a widening of income dispersion in Finland, France and Sweden, and a narrowing in Denmark, Norway and western Germany. However, in the United Kingdom and the Netherlands the quartile ratio shows a widening in income dispersion (and not a narrowing, as shown by the coefficients of Table 6.10), reflecting the relatively improved position of the income groups standing between the quartiles.[33] On the other hand, skewness increased slightly in the United Kingdom and western Germany and rather markedly in Sweden, while the distribution became more symmetrical in the other countries. The last two lines of Table 6.11 show whether and to what extent changes in the skewness are due to incomes standing above or below the median. In Finland, for instance, the distribution became more symmetrical, as well as more unequal, because the distance between the lower quartile and the median increased much more than the distance between the upper quartile and the median.

The changes in income dispersion in the household sector as a whole may result from several causes: a fall in the level of pensions, etc., relatively to average incomes, or a relative increase in the number of pensioners; a widening gap between the lowest and average pay level; or an increase in the proportion of young earners or unmarried women earners (who would count as separate incomes for tax purposes). These distinctions are extremely important for any analysis of the problem of low-income families, but the relative importance of all these different factors cannot easily be discovered from the data available.

From these different measures, and taking into account the statistical factors that may impair comparability of the income data, it is impossible to rank the countries according to the degree of inequality in income distribution with any certainty. Broadly, however, it appears that, whichever measure is adopted, Norway can be described as a country with relative equality in the distribution of household income, while France and to a lesser extent Finland show relative inequality. The other five countries stand in various intermediate positions according to the method of measurement used.

Changes within and between occupational groups

The personal sector may be divided in many different ways. In this section it has been broken down by the

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[31] Data for France are less significant as an indication of trends because of the short span between the two years shown; cyclical and random factors may have influenced the results to a considerable extent.

[32] In the German data, undistributed profits of companies are not imputed to individuals (on the basis of the number of shares or some other method), but companies are combined with individuals.

[33] The quartile ratio ignores, by definition, the changes which took place at either end of the scale. The reduction in inequality expressed by the coefficients of Table 6.10 for the United Kingdom and the Netherlands essentially reflects the relative deterioration of the top decile group.

TABLE 6.11

Indicators of income dispersion and skewness in some western European countries

	United Kingdom		Western Germany			Netherlands		Sweden		France		Denmark		Norway		Finland	
	1954	1964	1955	1960	1964	1952	1962	1954	1963	1956	1962	1953	1963	1957	1963	1952	1962
A. Total household sector																	
Quartile ratio Q_3/Q_1	2.93	3.06	2.41	2.13	2.12	2.54	2.62	2.87	3.31	3.43	3.65	3.05	2.80	2.73	2.51	2.91	3.84
Interquartile deviation $(Q_3\text{-}Q_1)\ M$	1.02	1.06	0.84	0.73	0.73	0.88	0.88	0.96	1.09	1.20	1.24	1.06	0.99	0.94	0.86	1.08	1.27
Skewness : $\frac{Q_3\text{-}M}{M\text{-}Q_1}$	1.16	1.18	1.08	1.10	1.11	1.03	0.91	0.97	1.07	1.39	1.34	1.21	1.21	1.05	1.01	1.49	1.29
$\frac{Q_3\text{-}M}{M}$	0.55	0.57	0.44	0.39	0.38	0.45	0.42	0.47	0.57	0.70	0.71	0.58	0.54	0.48	0.43	0.65	0.71
$\frac{M\text{-}Q_1}{M}$	0.47	0.48	0.40	0.35	0.35	0.43	0.46	0.49	0.53	0.50	0.53	0.48	0.45	0.46	0.43	0.43	0.55

	United Kingdom		Western Germany			Netherlands		Sweden		France		
	1954	1964	1955	1960	1964	1952	1962	1954	1963	1952	1956	1962
B. Wage- and salary-earners												
Quartile ratio Q_3/Q_1	1.96	2.04	1.94	1.79	1.76	2.54	2.62	2.52	2.62	1.81	1.89	1.97
Interquartile deviation $(Q_3\text{-}Q_1)\ M$	0.67	0.70	0.64	0.58	0.55	0.86	0.84	0.84	0.88	0.63	0.65	0.69
Skewness : $\frac{Q_3\text{-}M}{M\text{-}Q_1}$	1.19	1.16	0.99	1.09	1.03	0.96	0.73	0.86	0.90	1.81	1.33	1.44
$\frac{Q_3\text{-}M}{M}$	0.36	0.38	0.32	0.30	0.28	0.42	0.35	0.39	0.42	0.40	0.37	0.41
$\frac{M\text{-}Q_1}{M}$	0.31	0.32	0.32	0.28	0.27	0.44	0.48	0.45	0.46	0.22	0.28	0.28

Sources: as for Tables 6.10 and 6.13.

occupational status of the income receivers: between wage-earners, salary-earners, self-employed, and non-active persons. For four countries, it has been possible to show the relative numerical importance of these groups in the two years of reference (see Table 6.12). In all four countries, there has been a relative decline in the number of self-employed and an increase in the number of non-active persons.[34] The two movements have largely offset each other and, consequently, the share of wage- and salary-earners in the total number of income receivers has hardly changed in any country.[35]

Non-active persons are heavily concentrated in the lower income groups and their increasing share in the total number of income receivers has had the general effect of widening the income dispersion. By contrast, the falling proportion of self-employed has operated, probably everywhere, to reduce inequality, since income dispersion among the self-employed is larger than for wage- and salary-earners. The role played by between- and within-group changes in bringing about the overall changes in income dispersion may be examined more closely in the Netherlands, Sweden and France, with the help of the following table:

Maximum equalization percentages by occupational groups

	Netherlands		*Sweden*		*France*	
	1952	*1962*	*1954*	*1963*	*1956*	*1962*
A — *Income transfer, as a percentage of each group's income, required to obtain equal distribution of income within each group*						
Wage- and salary-earners	27	27	24	25	24	26
Self-employed	33	34	28	29	44	50
Non-active persons	36	28	32	28	39	40
B — *Income transfer, as a percentage of each group's income, required to obtain equality of income in the whole household sector*						
Wage- and salary-earners	18	13	−4	−9	−7	−7
Self-employed	−41	−47	−16	−13	−16	−22
Non-active persons	31	35	80	106	97	64
C — *Income transfer, as a percentage of total household income, required to obtain equality of income in the whole household sector*						
Wage- and salary-earners	10.7	8.7	−2.9	−7.1	−3.6	−3.6
Self-employed	−13.1	−12.1	−1.6	−1.5	−6.1	−6.8
Non-active persons	2.4	3.4	5.5	8.6	9.7	10.4

NOTE. — The measures of dispersion used in this text-table are maximum equalization percentages (see Tables 6.10 and 6.13). In parts A and B of the above text-table they are expressed as a share of income held by each occupational group; in Part C of the table, as a share of total household income.

Part A of the table shows the percentage of the total income of the group which would have to be transferred *within* the group to reach complete equality among all its members. For instance, in the Netherlands, in 1952 as well as in 1962, 27 per cent of the total income of wage- and salary-earners would have had to be transferred from rich to poor members to attain complete equality among all wage- and salary-earners. The ratio also remained unchanged, at a higher level, for the self-employed, while it declined for non-active persons. This means that income dispersion remained identical both for wage- and salary-earners and for the self-employed, while it was reduced for non-active persons.

This last reduction is not surprising. The number of non-active persons receiving an income rose considerably between the two years because of population ageing and the enlargement of social security schemes. Thus, a larger proportion of non-active persons receiving an income was constituted by pensioners in 1962 than in 1952 and the income dispersion *within* the group narrowed. But, as is shown in Part B of the table, the income gap increased between non-active persons and the average for the household sector as a whole, because pensioners are clustered in low income brackets. In 1962, to bring up the average income of non-active persons to the household sector average, the income of non-active persons would have had to be increased by 35 per cent (against 31 per cent in 1952).

If non-active persons became relatively poorer in the Netherlands, the self-employed became relatively richer in comparison to the average income of the personal sector as a whole. The relatively improved position of the self-employed is largely due to the outflow of manpower from agriculture.[36] Consequently, in the Netherlands, as in most other countries, the relative size of the self-employed group was considerably reduced both in terms of number and total income. This reduction, since the self-employed are a group with wide income dispersion, had the effect of attenuating income dispersion for the household sector as a whole; and its effect was bigger than the opposite (widening) effect of an increasing non-

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[34] The increase in the number of non-active persons with incomes is not wholly explained by the ageing of the population; it also reflects an extension of social security schemes.

[35] As was shown in Chapter 2, the relative constancy of the share of wage- and salary-earners conceals a relative decline of the former, and a corresponding expansion of the latter.

[36] In the Netherlands, as in most other western European countries, the low income fringe of self-employed is largely constituted by self-employment in agriculture.

TABLE 6.12

Percentage distribution of income recipients in each decile group according to the recipient's status

Country, year and type of income recipient	Total		Decile group									
	Income per cent	Number per cent	I	II	III	IV	V	VI	VII	VIII	IX	X
Denmark												
1953												
Wage-earners	30.2	32.9	27	30	30	31	38	—	41	—	30	21
Salary-earners	24.9	18.1	6	6	9	11	18	—	21	—	32	35
Self-employed	34.2	27.9	20	13	23	30	29	—	29	—	34	41
Non-active	10.7	21.1	47	51	38	28	15	—	9	—	4	3
1963												
Wage-earners	31.8	31.7	24	19	21	24	36	43	46	45	39	19
Salary-earners	29.3	19.9	6	4	6	8	14	19	25	31	38	48
Self-employed	26.3	22.6	13	11	19	29	33	28	23	20	20	31
Non-active	12.6	25.8	57	66	54	39	17	10	6	4	3	2
Sweden												
1954												
Wage- and salary-earners	76.6	73.7	62	57	66	70	75	79	84	86	83	73
Self-employed	16.5	13.9	6	9	14	18	18	15	13	11	14	22
Non-active	6.9	12.4	32	34	20	12	7	6	3	3	3	5
1963												
Wage- and salary-earners	80.3	73.1	60	43	55	69	76	82	86	89	88	83
Self-employed	11.5	10.1	5	7	10	14	13	11	10	8	9	14
Non-active	8.2	16.8	35	50	35	17	11	7	4	3	3	3
France [a]												
1956												
Wage-earners	32.1	35.3	— 17	—	42	51	53	47	45	45	34	15
Salary-earners	20.1	13.3	— 2	—	6	11	16	21	19	22	27	25
Self-employed	37.8	31.7	— 53	—	30	21	20	22	24	24	31	53
Non-active	10.0	19.7	— 28	—	22	17	11	10	9	9	8	7
1962												
Wage-earners	26.3	30.7	— 10	—	30	43	47	48	42	40	27	10
Salary-earners	26.6	18.6	— 3	—	7	11	18	19	29	31	35	30
Self-employed	30.8	24.0	— 34	—	23	15	14	14	15	16	25	50
Non-active	16.3	26.7	— 53	—	40	31	21	19	14	13	13	10
Netherlands												
1952												
Wage-earners	32.2	46.7	59	— 50	—	53	56	57	59	51	28	4
Salary-earners	28.4	24.6	21	— 23	—	21	19	19	20	25	38	37
Self-employed	31.7	18.6	3	— 10	—	14	16	16	16	19	29	53
Non-active	7.7	10.1	17	— 17	—	12	9	8	5	5	5	6
1962												
Wage-earners	32.1	45.8	64	47	38	44	58	65	63	50	25	4
Salary-earners	32.7	27.7	22	27	24	20	18	18	22	33	47	45
Self-employed	25.5	13.4	4	5	8	11	10	9	9	12	22	44
Non-active	9.7	13.1	10	21	30	25	14	8	6	5	6	7

Sources: The same as for Table 6.10 except Denmark, 1953, *Statistiske Efterretninger*, 1955, p. 322; France, 1956, *Etudes et Conjoncture*, 1963, p. 435 et 1962, *Etudes et Conjoncture*, December 1965, pp. 31-32.

NOTE.—The table should be read as follows: Denmark 1953—30.2 per cent of total income was absorbed by wage-earners, 24.9 per cent by salary-earners, 34.2 per cent by self-employers and 10.7 per cent by non-active. Of the total number of income recipients, 32.9 per cent were wage-earners, etc.; of the poorest 10 per cent (decile I) of income recipients, 27 per cent were wage-earners, 6 salary-earners, etc. Total income o each decile group is shown in Table 6.10.

[a] Self-employed include higher employees (*cadres supérieurs*). Figures are not wholl comparable, because in 1962 the service staff is included with self-employed (instea of with wage-earners as in 1956) and the foremen are with salary-earners (instead o with wage-earners as in 1956).

TABLE 6.13

Percentage distribution of income of wage- and salary-earners before tax by decile and percentile groups [a]

	United Kingdom		Western Germany			Netherlands		France			Sweden	
	1954/55	1963/64	1955	1960	1964	1952	1962	1952	1956	1962	1954	1963
Decile groups												
1	3.9	3.8	2.0	2.4	2.7	1.1	0.9	3.0	3.5	2.6	2.0	1.8
2	5.1	4.7	4.9	5.2	5.4	3.1	2.9	5.5	5.0	4.9	3.3	3.4
3	6.4	6.0	6.3	6.7	6.7	4.3	4.2	5.8	5.8	6.0	5.2	4.8
4	7.7	7.5	7.7	7.8	7.9	6.6	6.4	7.0	6.7	6.6	6.6	6.5
5	8.7	8.7	8.6	8.9	8.8	8.4	8.5	7.7	7.9	7.4	8.5	8.5
6	9.9	10.1	10.0	9.8	9.6	9.4	9.6	8.8	8.6	8.5	9.9	9.9
7	11.2	11.4	10.9	10.6	10.8	10.8	11.4	10.1	9.6	9.5	11.3	10.9
8	12.0	12.4	12.1	11.7	11.9	12.5	13.1	11.4	11.4	11.4	13.0	12.7
9	13.2	14.1	14.5	14.3	14.2	14.8	14.8	13.6	14.8	14.1	15.1	15.5
10	21.9	21.3	23.0	22.6	22.0	29.0	28.2	27.1	26.7	29.0	25.1	26.0
Total	100	100	100	100	100	100	100	100	100	100	100	100
Percentile groups												
90-92.5	4.0	3.9	4.0	4.5	4.1	4.3	4.4	4.2	3.6	4.5	4.2	4.7
92.5-95	3.9	4.2	4.6	4.3	4.3	5.0	5.0	4.9	4.9	5.5	4.9	5.1
95-97.5	5.0	5.1	5.4	5.6	5.6	5.7	5.9	5.6	6.4	6.0	5.5	6.1
97.5-98.75	3.0	2.8	3.2	3.2	3.0	4.0	4.3	5.0	4.5	4.0	3.9	3.3
98.75-100	6.0	5.3	5.8	5.0	5.0	10.0	8.6	7.4	7.3	9.0	6.6	6.8
Total	21.9	21.3	23.0	22.6	22.0	29.0	28.2	27.1	26.7	29.0	25.1	26.0
Inequality coefficient	0.27	0.27	0.30	0.28	0.28	0.40	0.40	0.32	0.33	0.35	0.35	0.36
Maximum equalization percentage	19	20	21	19	19	27	27	23	23	24	24	25

Sources:

United Kingdom

1954/55: *Ninety-ninth Report of the Commissioners of Her Majesty's Inland Revenue for the year ended 31st March 1956*, Table 55, p. 67, columns 4-5. (Wage- and salary-earners include pensioners.)

1963/64: *Report of the Commissioners of Her Majesty's Inland Revenue for the year ended 31st March 1965*, Table 61, p. 83, columns 4-9 and p. 84, columns 2-5. Pensioners have been included for the sake of comparability with 1954/55.

Western Germany

Data provided, before publication, by Professor G. Göseke, Deutsches Institut für Wirtschaftsforschung, Berlin.

Netherlands

1952: *Inkomensverdeling 1952 en vermogensverdeling 1953*, pp. 28-29, items from "education personnel" to "other workers";

1962: Direct communication—items: similar groups.

France

1952: *Bulletin mensuel de statistique*, October-December 1954, p. 58;

1956: *Études statistiques*, October-December 1958, p. 64-65; Only the distribution of taxpayers is shown. The average income of each group has been taken from the graph III A 1 and allocated to all taxpayers of that group to arrive at total income of the group.

1962: *Études statistiques*, April-June 1964, p. 120. Data were taken from the graph E.

Sweden

1954: *Skattetaxeringarna samt fördelningen av inkomst och förmögenhet* (taxeringsåret 1955), p. 20-21;

1963: *Skattetaxeringarna samt fördelningen av inkomst och förmögenhet* (taxeringsåret 1964), pp. 24-25. Only the distribution of taxpayers by size of income is shown. The distribution of income was obtained by allocating to the groups of taxpayers the median income of each income range.

[a] Assessed income for United Kingdom; income from employment for France; total income for other countries. The statistical unit is the taxpayer except in France where it is the individual person.

active group. Briefly, in the Netherlands, the slight reduction in inequality emerging for the household sector as a whole is entirely due to the shrinking of the proportion of self-employed. There was no reduction in inequality for wage- and salary-earners. In France and Sweden, by contrast, the widening of income dispersion is bigger for the household sector as a whole than for wage- and salary-earners alone. In France, both self-employed and non-active persons contributed to the widening income dispersion of the household sector as a whole.[37] In Sweden, the widening effect of a rising proportion of non-active persons was considerably bigger than the narrowing effect of a falling proportion of self-employed.

The size distribution of pre-tax incomes of *wage- and salary-earners* (again using tax units and not individuals, except in France), by decile and percentile groups, is given in Table 6.13 for the same years as are shown for total household income in Table 6.10, but data for only five countries are available.[38] The general measures of dispersion show a substantially greater degree of equality among wage- and salary-earners than for household incomes as a whole in France, western Germany and the United Kingdom. Indeed, western Germany appears as a country with a relatively equal income distribution among wage- and salary-earners (by the measures in both Tables 6.11 and 6.13). The difference is much less in Sweden and the Netherlands, where inequality among wage- and salary-earners appear markedly greater than in the other countries shown.[39] The table confirms that no narrowing of income dispersion took place in the Netherlands and also shows a virtual constancy in the United Kingdom, in spite of a (small) deterioration in the position of persons in the top decile group. In western Germany, the tendency towards a reduction in income inequality, still apparent between 1955 and 1960, ceased thereafter. In France and Sweden, the widening in income dispersion found in the household sector as a whole is also apparent for wage- and salary-earners. It is only in Norway that income inequality lessened for wage- and salary-earners during the period under review; although no estimates are available, the reduced dispersion in total household incomes must almost certainly have applied to wage- and salary-earners.[40]

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[37] Probably a part of the explanation of the "anomalous" behaviour of self-employment in France can be found in the fiscal system. Since personal income-taxes are relatively low, unincorporated enterprises do not have the same incentive to take a corporate form as they have in countries where personal income-tax is greater. Thus, in France (as Table 6.12 shows) the self-employed make up an exceptionally high proportion of the incomes in the top decile group.

[38] For France, a different source has been used in Table 6.10 (total household sector) and in Table 6.13 (wage- and salary-earners). In Table 6.10, the statistical unit is the household while in Table 6.13 it is individual. The source used in Table 6.13 allows comparisons over a longer period.

Lastly, the influence of *property income* (income from rent, interest and dividends) must be assessed. It has been shown earlier that property income rose more rapidly than total household income in a number of western European countries, though by no means in all, and Table 6.14 shows, as could be expected, that property income is largely concentrated in the upper income ranges.[41] *Ceteris paribus*, its increase should therefore have tended to widen income dispersion. But Table 6.10 shows a deterioration rather than an improvement in the relative position of the upper percentile groups in five of the eight countries listed, including the United Kingdom and the Netherlands (the two countries where investment income is relatively important). On the other hand, the position of the upper percentile groups improved in Sweden, France and Finland; but in Sweden property income did not increase at all in relation to total household income, and in France and Finland its importance is modest. It would thus appear that changes in property income played only a minor part in the changes in income distribution.

To recapitulate, perhaps the major individual forc leading to a reduction in income inequality during th 1950s and the first part of the 1960s has been the shif from self-employment (a high dispersion group) t wage- and salary-earners. A comparison with previou studies also suggests that the tendencies towards lessenin inequality which occurred between the pre-war year and the beginning of the 1950s have since been muc less evident. For wage- and salary-earners as a group too, recent tendencies seem to point either to a stabl or an increasing degree of income inequality.

The next sections examine the effect of taxation an benefits on primary income dispersion. Two majo questions arise: first, to what extent pre-tax incom dispersion is reduced by government action and, second whether the degree of government-induced reduction i income inequality has increased. Present information unfortunately, does not allow a clear-cut and comprehensive answer to either of these questions. Only partia and tentative indications can be put forward. The following paragraphs examine the changes in income dispersio brought about by direct taxes on household incomes.

Direct taxes on households

The main points to be examined here are the inter country differences, and also changes over time withi countries, in the degree of progression of income-tax Available information restricts the analysis to a few countries, but even so, inter-country differences in th degree of progression appear to be considerable, wherea changes over time have probably been very small.[42]

Table 6.15 shows, for Austria, western Germany, th Netherlands, Norway and the United Kingdom, th share of income-tax paid by each decile group of taxpayers in the most recent year available and (wher possible) about ten years earlier. It will be seen, first that in all these countries except Norway, where the ta burden is more widely spread, the upper tenth of taxpayers contribute well over half of the tax revenu (taking wage- and salary-earners and the self-employe together in Austria and western Germany). Indeed th top twentieth alone contribute about half the tota revenue in Austria, the Netherlands and the Unite Kingdom. Taxpayers below the median nowhere contribute more than 10 per cent except in Norway (abou 20 per cent). This concentration of tax paying has however, been everywhere somewhat reduced over th period shown (except for wage- and salary-earners i Austria): a smaller share of income-tax is paid by th top decile group and a higher share by most of the othe decile groups at the end of the period than at the beginning. In Norway, all decile groups except the top on increased their share; in the Netherlands and the Unite Kingdom, all the decile groups except the top one an the two lowest.[43]

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[39] This distribution of incomes by income units bears little relation to the distribution of average earnings by industry analysed in the previous chapter. It was there shown, for example, that for men wage-earners there is a relatively narrow dispersion between industry averages (see Chapter 5, Table 5.4) in contrast to the wide dispersion of individual wage/salary incomes.

[40] It is impossible to say to what extent changes in income dispersion for wage- and salary-earners are due to such factors as changing activity rates for married women or for juveniles or old persons. Activity rates for females rose in all countries examined in this section over the 1950s and the early 1960s. Since the earnings of wife and husband are considered as one income, this probably had the effect of widening income dispersion between people in low and middle decile groups. People in the lowest decile groups are largely old people and juvenile earners, where one income is more frequent. Activity rates for juveniles and old people have everywhere declined over the 1950s in industrialized western European countries; because of the low incomes prevailing for these categories, such a decline has probably reduced income inequality.

[41] For a table showing investment income in selected income ranges at the beginning of the 1950s for the United Kingdom, western Germany, Netherlands and Sweden, see the SURVEY for 1956 *(op. cit.)*, Chapter IX, p. 8.

[42] It will be recalled that in total the ratio of direct taxes to hous hold income increased gently between 1953-1955 and 1962-1964 i all twelve countries shown in Table 6.3, except Austria (where th ratio fell until 1959-1961 but was subsequently restored).

[43] However, for the two lowest deciles, tax rates were so lo (except in Norway) that the change only marginally affected thes groups of taxpayers.

TABLE 6.14

Investment income in selected income ranges in four western European countries

Income range		Interest and dividends	Rent
Limits in national currencies	Limits in terms of percentile groups	Percentage of total net income of each income group	
United Kingdom 1963/64 (£)			
180-800	-59.5	1.5	1.7
800-1,250	59.5-88.6	1.3	1.0
1,250-2,000	88.6-96.0	3.6	1.9
2,000-4,000	96.0-99.0	13.6	4.2
4,000-10,000	99.0-99.85	28.2	5.4
10,000 and above	99.85-100	49.0	5.8
Total		5.4	2.0
Western Germany 1961 (DM)			
0-12,000	-89.5	0.2	0.7
12,000-16,000	89.5-94.4	0.5	1.4
16,000-25,000	94.4-97.7	1.0	2.0
25,000-50,000	97.7-99.3	2.3	2.8
50,000-500,000	99.3-99.96	4.9	2.5
500,000 and above	99.96-100	8.3	1.0
Total		1.1	1.1
France 1962 (FF)			
0-20,000	-87.8	1.2	2.2
20,000-60,000	87.8-98.9	2.5	2.6
60,000-100,000	98.9-99.7	4.2	5.6
100,000 and above	99.7-100	11.4	3.2
Total		2.3	2.6
Netherlands 1959 (gld)			
0-5,000	-61	2.6	1.1
5,000-9,000	61-90	1.8	0.9
9,000-13,000	90-95.2	4.0	1.4
13,000-20,000	95.2-98.1	6.2	1.5
20,000-80,000	98.1-99.9	11.5	1.7
80,000 and above	99.9-100	23.1	1.0
Total		4.4	1.2

Sources:

United Kingdom: Cmnd. 2876, *Report of the Commissioners of Her Majesty's Inland Revenue* for the year ended 31st March 1965.
Total income, p. 87, column 3.
Interest and dividends, p. 85, column 3.
Rent, p. 85, column 4.

Western Germany: *Wirtschaft und Statistik*, March 1964, p. 137, May 1965, pp. 297, 296.

France: *Études et Conjoncture*, December 1965, pp. 31 and 40, 45.

Netherlands: *Inkomensverdeling 1959 en vermogensverdeling 1960*, pp. 103-115, (codes 04, 05 and 40).

NOTE. — 1. It is estimated that about 2 per cent of total investment income is omitted from these figures.
2. The figures under "rent" include a small amount of dividends and interest.

This does not necessarily mean that there has been a reduction in the progression of income-tax, because it ignores the simultaneous changes in pre-tax income dispersion. Changes in the "degree" of tax progression may be seen from Chart 6.2: for each country and for each income group, the two lines indicate the ratio of tax to income.[44] To make inter-temporal comparisons meaningful, the "tax ratio" corresponding to the median of the taxpayers in the two periods has been put on the same vertical axis, whereas the numbers on the horizontal axis indicate multiples of the median income. The chart shows that the median income was more heavily taxed at the end than at the beginning of the period under review in western Germany, the Netherlands and the United Kingdom; there was virtually no change in Norway; in Austria, there has been a net decline (between 1953 and 1957).

In the United Kingdom, the ratio of tax to income was higher in 1962 than in 1952 for people in the middle income range; but at the extreme top of the income scale, the 1962 tax rate is below that of 1954. In 1954, the highest fringe of taxpayers (accounting for less than 0.1 per cent of all taxpayers) had an average tax ratio of

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[44] A somewhat higher degree of progression would have appeared than that emerging from Chart 6.2 if tax ratios were calculated separately for taxpayers having the same family status (single, married with two children, etc.). This is so because, within limits, both income level and family size are functions of age; and higher tax rates resulting from higher incomes are partly offset by larger exemptions associated with family size. See, for instance, Table 6.19 for Norway. However, the proportions of tax exemptions and family allowances are different in the various countries. See below, Table 6.20.

84 per cent while in 1964 the ratio was less than 74 per cent. Some of this reduction in progression would have occurred even if the rate of tax had not changed, simply because of the rising level of money income. In fact, tax rates were reduced. The combined effect was to alleviate somewhat the high tax burden of the richest, while leaving virtually untaxed the first two decile groups of taxpayers, and increasing slightly the tax ratio for the other taxpayers constituting the greater part of the range.

In western Germany and Austria, separate data are available for wage- and salary-earners and for self-employed. In western Germany, the poorest twenty per cent of wage- and salary-earners paid in tax about one per cent of their income both in 1950 and in 1960, but from that point on, the 1960 ratio rises considerably more steeply than that of 1950, and the difference remains large until the end of the ninth decile. Subsequently, the difference narrows and virtually disappears. Thus the beneficiaries of changes in income-tax rates have been the richest strata of population, while for the bulk of households between the two extremes the tax ratio rose considerably. The Netherlands offers a somewhat different picture: whereas tax ratios have remained modest for taxpayers in low income groups — amounting to about 20 per cent of total taxpayers — for households in all other income ranges, tax rates have somewhat increased. As can be seen from Chart 6.2, the line for 1962 intersects from below the line for 1952. In Norway, the relative tax burden became heavier for middle-income taxpayers and lighter at both extremes. In Sweden and Denmark, aggregative data are not available but tax rates for married couples with two children were calculated and they show a certain reduction in the degree of progression in Sweden and a virtual constancy in Denmark.

Given the small changes which took place in the period under review in the degree of progression, inter-country differences remain strong, though even in this respect, as in many others, a certain narrowing of differences may be found. The Netherlands and the United Kingdom probably have the most progressive system of income-tax among all western European countries. In Norway and Sweden, tax rates for top incomes are not very different from those in the United Kingdom or in the Netherlands, but the curve comes down much less steeply in Norway and Sweden, where the tax system is less progressive and the overall tax rate is higher (see Table 6.3). In western Germany, the degree of progression is less than in the four countries just mentioned, and in Denmark, it has probably remained even less progressive than in western Germany. Data are not available for the other western European countries, but where — as in France or Italy — the average level of income-tax is comparatively low, its redistributive effect cannot be big, whatever the level of progression.[45]

It will be realized that statistics based on tax assessments, like those quoted above, are always subject to

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[45] For a comparison of income-tax progression in a number of western European countries before the war and in the middle of the 1950s for a family with two children, see the SURVEY for 1956, *(op. cit.)*, Chapter IX, p. 18 ff.

TABLE 6.15

Distribution of income-tax by decile groups of taxpayers in selected western European countries

Percentages

Number of taxpayers by deciles	Austria				Western Germany				Netherlands		Norway		United Kingdom	
	Wage- and salary-earners		Self-employed		Wage- and salary-earners		Self-employed							
	1953	1957	1952	1962	1950	1960	1950	1961	1952	1962	1957	1963	1954	1964
1, 2	0.9	0.6	0.4	0.5	0.3	1.9	0.3	0.8	0.6	0.5	2.5	2.9	0.1	0
3	1.6	0.9	0.6	0.5	1.9	3.7	0.4	0.8	0.9	1.2	3.3	3.6	0.2	0.5
4	3.9	2.2	0.8	1.1	3.2	5.4	0.7	0.9	2.6	3.0	4.7	5.4	1.3	2.1
5	6.2	3.3	1.2	1.4	4.8	6.9	1.0	1.7	3.3	4.1	6.5	7.2	2.6	3.6
6	7.3	5.2	2.2	2.0	6.2	8.6	1.2	1.9	3.8	4.8	7.9	8.7	3.6	5.5
7	8.6	7.2	3.3	2.6	7.9	9.7	2.4	2.8	4.5	5.6	9.6	10.4	4.7	6.7
8	10.7	9.4	5.0	7.1	10.0	11.8	4.3	4.5	5.8	7.1	11.1	12.0	5.9	9.4
9	15.0	15.1	11.3	12.3	14.7	15.1	8.7	8.4	9.5	10.7	14.4	14.6	8.4	12.7
10	45.8	56.1	75.2	72.5	51.0	36.9	81.0	78.2	69.0	63.0	40.0	35.2	73.2	59.5
of which first half of tenth decile	11.4	13.7	12.3	12.4	10.9	10.7	9.2	9.2	9.0	9.7	10.2	10.3	8.2	10.0

Sources:

All results were obtained graphically from the figures in the sources hereafter.

Austria: Wage- and salary-earners: *Statistisches Handbuch für die Republik Österreich*, Vienna 1956, p. 229, and Vienna 1961, p. 271.
Self-employed: 1952, *Statistisches Handbuch für die Republik Österreich*, Vienna 1956, p. 223; 1962, *Statistische Nachrichten*, February 1966, p. 80.

Western Germany: Wage- and salary-earners; Data provided before publication by Professor G. Göseke, Deutsches Institut für Wirtschaftsforschung, Berlin.
Self-employed: *Das Einkommen der Einkommen—und Körperschaftsteuerpflichtigen und seine Besteuerung; Statistik der Bundesrepublik Deutschland*, Band 125, pp. 39, 46, 47;
Wirtschaft und Statistik, May 1965, p. 297.

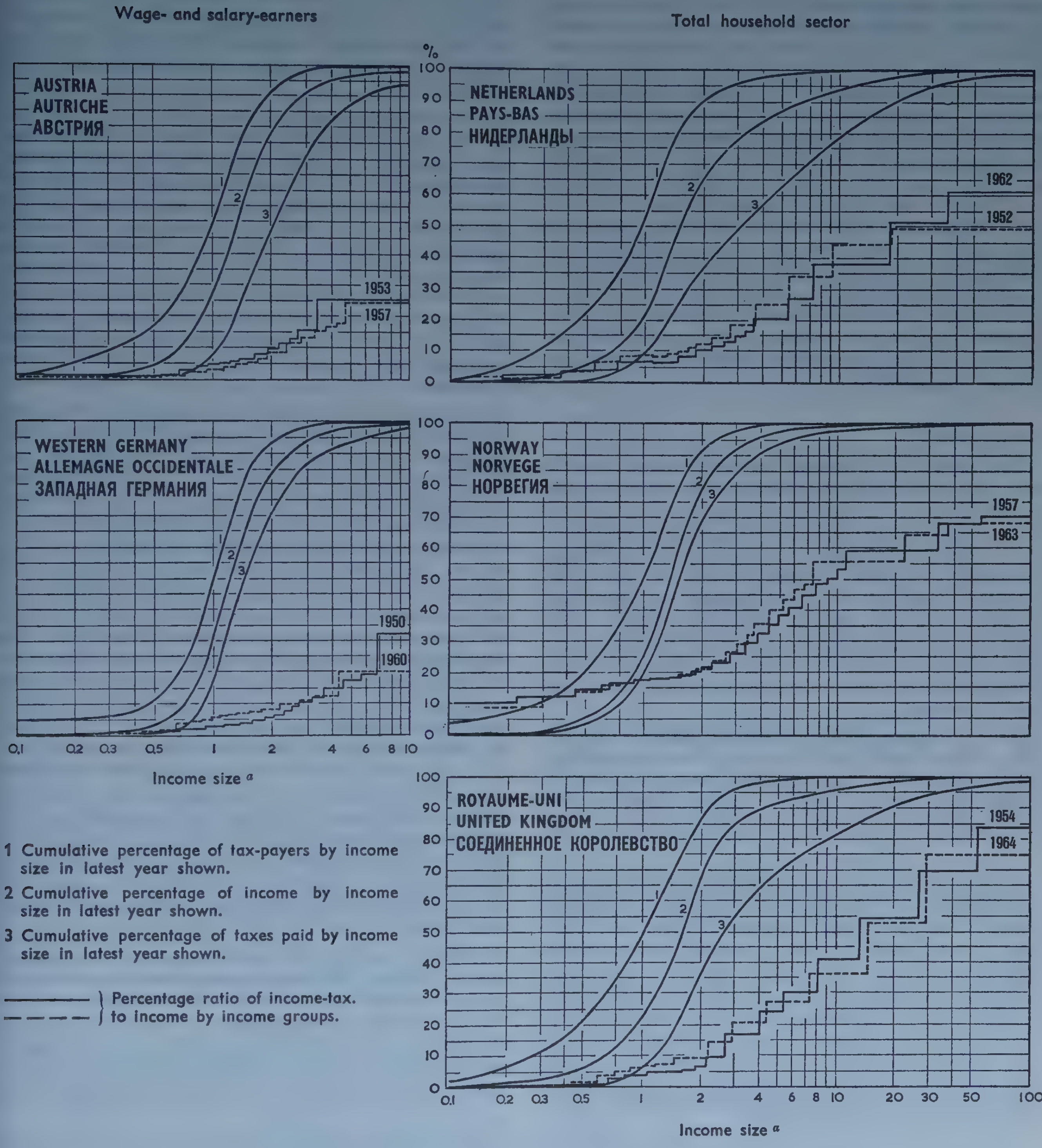
Netherlands: *Inkomensverdeling 1952 en vermogensverdeling, 1953*, p. 11;
Maandstatistiek van het financiewezen, August 1966, pp. 375-376.

Norway: *Skattestatistikk for inntektsårene 1956 og 1957*, Table 6;
Skattestatistikk, inntektsåret 1963, Table 9.

United Kingdom: National income and expenditure 1960, p. 20; 1966, p. 33.

CHART 6.2

Income, taxes and tax-payers by income size



Sources: See Table 6.10.

NOTE. — [a] Expressed as a multiple of the income of the median tax-payer.

certain reservations. They depend not only on the accuracy of income assessment but also on the income concept adopted for tax purposes (for example, on the deductions from income allowed as expenses, on the systems of assessing income in kind, etc.). In the higher income ranges — especially for the self-employed — such factors may be significant. In the lower income ranges also, much depends on the severity of the assessment system (for example, on how far supplementary and irregular sources of income are brought into account where the tax collectable is in any case very small). In addition, it must be noted that only taxes on *income* have been analysed here. Capital gains, which affect mainly the upper end of the income scale, have been ignored; yet, from some points of view, their effects are difficult to distinguish from those of income inequality. Capital gains are subject to tax in some countries (for example, in Italy there is a municipal tax on the appreciation of building sites) but, on the whole, in most western European countries, including Italy, by far the major part of capital gains escapes taxation.[46] If capital gains and any taxes imposed on them were included, the degree of tax progression would be considerably reduced at the upper end of the income scale.[47]

Indirect taxes

The redistributive effects of indirect taxes and subsidies depend upon the pattern of rates in relation to the income elasticities for the items taxed; the same applies to subsidies affecting household expenditure. The redistribution may be between rich and poor, but may also be between households of similar income but with different composition, or different patterns of expenditure. Thus, food subsidies may help not only the poor because of the low income elasticity for food, but also families with a large number of children, while taxes on tobacco may be regarded as a redistribution between smokers and the community generally.

It is true that existing systems of indirect taxes are not, as a rule, based primarily upon a conscious redistributive principle. In most systems there is, indeed, a traditional element of "luxury" taxation, although not always closely related with contemporary income elasticities. For example, it is common to tax drink and tobacco[48] heavily; the income elasticities for drink and tobacco are not far from unity, and are in some countries less than unity; if there is any redistributive effect between rich and poor nowadays, it is more likely to be a regressive than a progressive effect.[49] On the other hand, taxes on motor-cars and petrol, and on many other consumer durables, may still have a progressive effect, but a smaller one than in the past. The progressiveness of food subsidies depends in part on the rates of subsidy for individual foods.

It has been pointed out that while some countries, such as the United Kingdom, have an indirect tax system based on selective taxation of a few goods, other countries have a system in which taxes are diffused over more or less the whole range of goods and services (the turnover tax in western Germany and the added-value tax in France). A completely uniform tax rate in relation to the final sale prices of all goods and services would have no significant redistributive effect; it would be almost wholly proportional to disposable income (apart from minor differentiations due to differences in savings ratios and, possibly, to differences in price elasticities).

In practice, as will be shown below, the effect of indirect tax systems at present tends to be proportional, even though tax rates are not uniform, and tends towards the regressive especially where taxes on drink and tobacco are heavily relied upon. The reasons for this are fairly obvious. If the total yield of indirect taxes is to be — as it generally is — 15 per cent or more of the gross national product, then the taxes must be very widely spread. To find items for selectively high taxation, to balance the regressive effects of the large revenues received from taxing commodities largely consumed by the bulk of the households, is becoming increasingly difficult. The items of consumption subject to high income elasticity — such as foreign travel, insurance and banking services, private expenditure on health and education, or books — include few which have been traditionally regarded as appropriate objects for high taxation; some of them could not be expected to yield much revenue, whatever the rates. (Indeed certain items with high income elasticity, such as theatres and concerts, are subsidized, for admirable reasons, which introduces a minor regressive element.) Furthermore, to bring about redistribution, tax rates should not be so high as to divert expenditure to lower-taxed or non-taxed commodities and services.

It will be seen in the following pages that indirect taxes, excluding subsidies, are regressive in terms of original income both in the United Kingdom and in western Germany. The degree of regression becomes considerable for households in top income brackets. In the United Kingdom indirect taxes tend to be, in terms of original income, somewhat more regressive than in western Germany, essentially owing to the strong regressive effect of taxes on tobacco.[50]

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[46] This statement refers to those realized capital gains which are, so to say, only incidental to the normal activity of the taxpayers; in other words, to those capital gains which are realized by individuals outside the conduct of a regular business. The treatment of such kinds of capital gains varies widely in western Europe. In most countries a distinction is made between short-term ("speculative") gains on the one hand, and long-term gains on the other hand. Certain countries subject short-term capital gains to income-tax at reduced rates or to a special tax, while long-term gains are free of tax. In others, short-term gains are subject to income-tax at regular rates while long-term gains are either tax-free or subject to tax at a lower rate. An exemption for virtually all private capital gains realized by individuals exists in Ireland and the Netherlands. (See "Taxation of Capital Gains realized by Individuals in Europe" in *European Taxation*, September 1965.)

[47] In the United States, according to a recent investigation (see R. B. Goode, *The Individual Income Tax*, Washington, 1966, especially Chapter IX), the inclusion of realized capital gains in taxable income would virtually eliminate any progression starting from an income level of 100,000 dollars per year; the tax ratio would never surpass 30 per cent.

[48] The reason why tobacco has been selected for increased taxation in recent years in some countries is because of its probable adverse effects on health, rather than because it is still regarded as a luxury.

[49] In the United Kingdom, for instance, the income elasticity for beer is well below one, but for other alcoholic drinks well above one.

In a few other countries, similar studies have been made of the incidence by income groups of indirect taxes. An analysis for Denmark,[51] in 1955, covering most indirect taxes, showed a certain but very moderate progressiveness in relation to incomes. This was mainly the result of heavy taxes on car sales supplemented by the taxes on wines and spirits; taxes on beer, clothing, radios, entertainments are roughly proportional; while taxes on coffee, tea, chocolate and tobacco had a regressive effect. At that time the Danish indirect tax system was dominated by specific indirect taxes on selected goods; since then, the introduction of a general sales tax may have made the incidence of the system more nearly proportional. In Sweden, an estimate of the incidence for households in different income brackets was limited to some categories only of indirect taxes, but the incidence was calculated separately for households of different size. In the case of the general sales tax on consumer goods, family composition did not prove to be an important element of differentiation (the same result was obtained in British investigations for most indirect taxes excluding subsidies); tax incidence was slightly regressive for most family types.[52] A study of the incidence of indirect taxes and subsidies (especially rent subsidies) in the Netherlands, for 1956, showed that indirect taxes as a whole (the general turnover tax together with heavy duties on particular items, especially tobacco) were roughly proportional to income for households within income ranges from 3,000 to 6,000 guilders a year. If subsidies are left out of the account, a slight regressive effect appears.[53]

Investigations made recently in the United States and Canada indicate that in both countries indirect taxes are somewhat regressive. Indeed, if comparison is at all meaningful for investigations using different basic material and somewhat different methods, the degree of regression appears rather more marked in the United States than in the other countries quoted. Both in the United States and Canada, local taxes appear to be more regressive than the federal ones.[54]

A common conclusion from these studies is that all the indirect tax/subsidy structures investigated show an incidence, by income groups, which is never very far from proportional to income over the great majority of households not at either extreme of the income spectrum. Meanwhile, social security contributions, according to the system, tend to be either regressive or proportional. If the whole tax/benefit system is to have a progressive effect, it must rely on a structure of direct taxes and social security benefits which is so strongly progressive as to counteract the regressive or proportional effects of indirect taxes and social security contributions.

The net redistributive effects of all taxes and social benefits

Direct taxes on income and taxes on expenditure are only two forms of redistribution by government action between households of different income size, and are not, in all countries, the most important. For a complete picture, it is necessary to take into account, as has been emphasized throughout, the redistributive effects of social security contributions, and of social security and other benefits provided by government. The general pattern of redistribution in western Europe may be, then, summarized as follows:

- a system of direct taxation which is, to varying degrees, progressive.
- a system of social security contributions which is either regressive (with uniform contributions), or more or less proportional (if the contributions are pay-related).
- a system of indirect taxation and subsidies (mainly on food and housing) which is unlikely to be either very progressive or regressive, in present circumstances.
- a system of social security transfers and of collective consumption (in the form of health and education services) which as a whole, by its nature, tends to be progressive.

In addition, the last two systems may have a redistributive effect not only as between rich and poor, but also as between households of different composition and of different expenditure habits.

It is to be expected that the net effect on inequality of these different governmental operations will vary greatly from country to country. Each system has tended to evolve independently, with its own objectives and principles, and subject to its own necessities. It has not hitherto been usual for governments to regard the different ways in which these various taxes and benefits influence the economic circumstances of different types of household as parts of an integrated system of redistribution. Indeed there are few studies which attempt any estimate of this net effect. One essential requirement for such an estimate, especially of the incidence of indirect taxes and subsidies, is a fairly detailed breakdown — which can be derived only from household budget enquiries — of the pattern of household expenditure according to income, types of income and household composition. Another essential requirement, in principle obtainable from input-output analyses if prepared in the appropriate way, is an estimate of the incidence of indirect taxes and subsidies, at various stages of production and sale, on the individual items of consumers' expenditure (a requirement which is less important when the bulk of indirect taxes falls on finished commodities near the point of final sale).[55]

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[50] See *Economic Trends*, February 1964, pp. xvi, xvii.

[51] *Statistiske Efterretninger* 1958, No. 46.

[52] *Nytt Skattesystem*, SOU 1964: 25, pp. 45-46, Stockholm 1964.

[53] Central Bureau of Statistics, Belastingdruk op Gezinnen, *Statistische en Econometrische Onderzoekingen*, 1959, 2nd quarter.

[54] For the United States, see R. A. Musgrave, "Estimating the Distribution of Tax Burden", in *Income and Wealth*, Series X (Ed. C. Clark and G. Stuvel), London 1964. For Canada, see Irving J. Goffman, "Incidence of Taxation in Canada", in *Public Finance*, Vol. XIX, 1964, No. 1.

[55] From the uniform series of household budget information now being compiled by the countries in the European Economic Community, it should soon become possible to meet the first of these

Comprehensive estimates have, however, been made in three countries — the United Kingdom, western Germany and (from a rather different point of view) Norway. These are summarized and provide an illustration of the kind of results that can be obtained.

The three comprehensive studies of taxes and benefits are not uniformly complete. In all three, direct taxes, indirect taxes, and social security contributions are taken into account; but on the side of benefits the studies are less homogeneous. The United Kingdom study includes all cash transfers and public consumption for health and education but only some subsidies (subsidies on foodstuffs are excluded). The German and Norwegian investigations include all subsidies but exclude expenditure "in kind" for education and (probably) part of the expenditure "in kind" for health. The income concept adopted in the three investigations refers to family income before taxes and benefits, and is called here "original income".[56]

In investigations of this kind, *all* taxes are compared only with those kinds of government expenditure which can reasonably be allocated among households (excluding, for instance, administration and defence). Thus the interest of the analysis lies not so much in finding the "break-even" points where benefits balance taxes but in discovering the progression of the net balance of taxes and benefits for households at different income levels.[57]

Taxes and benefits: the United Kingdom

Estimates of the incidence of taxes and benefits on household incomes in the United Kingdom, for various income ranges and different family sizes, have been compiled by the Central Statistical Office.[58] The latest one refers to the years 1963 and 1964; it takes into account virtually all taxes on households (direct taxes and social security contributions), indirect taxes on intermediate products and on final goods and services, current transfers from government to households, current public expenditure "in kind" for health and education.[59] Subsidies on agricultural products, which constitute the bulk of total subsidies, have always been excluded.[60] Some of the major results are presented in Table 6.16.

Income-tax (including surtax) may appear less progressive in Table 6.16 than Chart 6.2 would suggest; this is partly because households in the highest income groups have been excluded from the household survey (on which Table 6.16 is based), and partly because taxable income from pensions is excluded from original income.[61] Thus for the great majority of households, but excluding those at either extreme of the income scale, the degree of progression of income-tax is not very steep. It is only within the top decile group, and especially within the upper half of the top decile, that income-tax rates rise steeply.[62]

Social insurance contributions are progressive in the lower income ranges, because these ranges include a certain number of retired persons who do not pay them. But above the poorest 15 per cent of households, social contributions — being based mainly on flat rates irrespective of income — naturally become regressive in effect. Thus, taken together, income-taxes and social contributions have only a very mild progressive effect: among the 85 per cent of households covered by the survey, with annual incomes between £460 and £1,450, their combined effect varied only for 13½ to 15 per cent of income.

The incidence of indirect taxes on original incomes is clearly regressive in the United Kingdom.[63] The regressiveness is particularly marked for taxes on tobacco, which account for more than 20 per cent of total indirect taxes. However, if tax incidence is related not to original income but to disposable income (i.e. if cash transfers are added back to incomes) indirect taxation appears to be roughly proportional. Thus uniform adjustments to indirect tax rates in the United Kingdom would not have any marked redistributive effects (apart from any effects through price elasticities).

On the tax side alone, the impression is conveyed of a "perverse" income redistribution with the poor paying proportionately more than the rich (apart from the top end of the scale, which is not shown in Table 6.16). The progressiveness of income-tax is more than offset by the regressive effect of indirect taxes and social security

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requirements. More difficulties arise from the second requirement, even with the input-output tables presented in comparable form by the Statistical Office of the European Communities.

[56] There are, however, some differences in definition and coverage between the three countries; see the country notes below.

[57] In principle, since only a part of government expenditure is covered, it would not be impossible to find that all households, whatever their income level, pay (in total taxes) more than they receive (in benefits in cash and in kind).

[58] "The incidence of taxes and social service benefits in 1963 and 1964", in *Economic Trends*, August 1966. A previous investigation made by Mr. J. L. Nicholson of the Central Statistical Office gives results for 1953, 1957 and 1959 ("Redistribution of Income in the United Kingdom in 1959, 1957 and 1953", *Income and Wealth*, Series X, *op. cit.*).

[59] Housing subsidies have been excluded from the 1963-1964 investigations (probably for practical reasons) while they were included in the previous ones. However, their exclusion hardly changes the general picture of the redistributive process.

[60] Food subsidies have been excluded because consumers are not regarded as benefiting from subsidies intended to keep prices down to the same level as the prices of imported food. On the other hand, the original income of farmers includes any subsidies they receive (see *Economic Trends*, February 1964, p. iii). Subsidies are, however, included in the west German and Norwegian investigations. In the United Kingdom investigation, the concept of original income virtually corresponds to income from employment and property, and all transfer payments (for instance, family allowances) have been excluded. Households consisting of one or two pensioners — so defined if more than three-quarters of their income is derived from old-age pensions, national insurance and national assistance — have been omitted.

[61] The highest income group covered by the Central Statistical Office investigation has an annual income of £2,122-£2,566, where average tax rates are about 14.5 per cent. Only 2.5 per cent out o all British households had a higher income in 1964, but this small group contributed more than 30 per cent of total tax receipts and, within this group, the average tax incidence varies from about 20 per cent to more than 70 per cent.

[62] As already mentioned (see footnote 44 on page 23), the combination in each income group of households of different compositio smoothes out the degree of progression of income-tax.

[63] "The Incidence of taxes and social service benefits in 1963 an 1964", *Economic Trends*, August 1966.

TABLE 6.16

United Kingdom : Taxes and benefits as percentage of original household income in 1964

	Ranges of original income per year (Sterling)												
	216-	260-	315-	382-	460-	559-	676-	816-	988-	1 196-	1 448-	1 752-	2 122- 2 566
Taxes													
1. Income-tax and surtax . .	4.0	3.3	7.5	6.7	6.2	4.8	4.8	5.3	6.7	7.4	9.4	12.7	14.3
2. National insurance contributions	2.7	1.8	3.8	8.9	7.3	8.8	9.2	8.2	7.5	6.6	5.7	5.0	3.5
3. = 1 + 2	6.7	5.1	11.3	15.6	13.5	13.6	14.0	13.5	14.2	14.0	15.1	17.7	17.8
4. Indirect taxes	40.3	32.3	25.0	26.8	21.4	21.0	19.3	18.4	17.6	16.2	15.5	14.1	12.1
5. = 3 + 4 (all taxes)	47.0	37.4	36.3	42.4	34.9	34.6	33.3	31.9	31.8	30.2	30.6	31.8	29.9
Benefits													
6. Direct benefits in cash . .	95.4	67.8	52.9	31.1	17.1	12.3	6.9	3.9	2.8	1.7	1.1	1.1	0.9
7. Direct benefits in kind . .	18.7	26.5	11.1	7.4	5.8	8.4	11.8	10.7	9.3	7.2	6.7	3.9	3.5
8. All benefits (6 + 7)	114.1	94.3	64.0	38.5	22.9	20.7	18.7	14.6	12.1	8.9	7.8	5.0	4.4
9. *All benefits minus all taxes* .	67.1	56.9	27.7	— 3.9	— 12.0	— 13.9	— 14.6	— 17.3	— 19.7	— 21.3	— 22.8	— 26.8	— 25.5
Number of families (percentage distribution by income range)	1.8	2.3	1.3	1.3	2.5	6.7	12.1	18.8	18.3	16.0	11.5	5.3	2.1

Source: Re-arranged from *Economic Trends*, August 1966 ("The Incidence of Taxes and Social Service Benefits in 1963 and 1964"). NOTE.—The table covers only a group of households in low and middle income brackets.

contributions. This type of overall tax structure is not a British peculiarity; it seems to be shared by most (probably all) western European countries. The tax system thus tends to counteract the redistributive effects of the government expenditure side of the budget, which are strongly progressive in all countries for which data could be assembled. Although redistributive expenditure is quantitatively less important (since only a part of government expenditure can be redistributive), Table 6.16 clearly shows that in the United Kingdom direct benefits to households (in cash and in kind) constitute by far the most progressive element in the redistributive machinery. Cash benefits are likely to be more progressive in the United Kingdom than in most western European countries, because of the use of the flat rate system, which is obviously more progressive than benefits related to income. The progressive effect of benefits does indeed more than offset the regressive effects of taxes, and this brings about a reduction in income dispersion. The reduction in inequality is considerable for households in the lower income groups (where pensions constitute a substantial proportion of final income). But over the income ranges covering the majority of households in Table 6.16, the final progressive effect is not large. [63a]

Table 6.16 does not show the redistributive effect of taxes and benefits on families of different size or composition at comparable income level. The Central Statistical Office studies show, however, that in the United Kingdom — as in most other western European countries — taxes and benefits are favourable to larger families. The discrimination in favour of large families applies in particular to income-tax and benefits while it is virtually absent for indirect taxes.

It does not appear that the degree of government-induced reduction in income inequality has increased in recent years. The reduction in inequality brought about by direct taxes and benefits alone was about 20 per cent both in 1959 and in 1953. A comparison — made with many reservations — between 1937 and 1959 also suggests that there was only a small increase in the amount of vertical redistribution between the two years, as a result of taxation and benefits.[64]

Taxes and cash benefits: western Germany

For western Germany, a first attempt to measure the total redistributive effect of taxes and benefits on households with different incomes has been made only recently; it refers to the years 1955 and 1960.[65] The study includes all direct taxes paid out of personal primary income, social security contributions, all indirect taxes, subsidies and benefits in cash. Benefits in kind (18 per cent of total benefits in 1960) have been excluded because of the difficulties of distributing them by income groups.

The investigation covers all families (including pensioners' families) but only income originating from employment and property is considered as "original income". Pensions are treated as "redistributed income". Thus for pensioners' households the ratios of "tax to income" and "benefits to income" are hardly significant, since the original income may well be zero. The findings are summarized in Table 6.17.[66]

Direct taxes as a percentage of original income are, in effect, proportional for the 60 per cent of households with the lowest incomes; from there on, the progression starts, but it is important only for the top 7 per cent of households; and even in that group, the rate is only two percentage points higher than the rate for the highest income group included in the United Kingdom investigation. Thus, Tables 6.16 and 6.17 confirm the finding of Chart 6.2 — the stronger degree of progression of income-tax in the United Kingdom than in western Germany.

Social security contributions in western Germany, in contrast to Britain, are roughly proportional to income, except at the extreme ends of the distribution. For two-thirds of the households, they vary only between 15 and 20 per cent of original income (being about 18 per cent in the highest income groups against 8 per cent in the United Kingdom). This is because of the pay-related system of social insurance adopted in western Germany. The lack of proportionality at the extremes is due to the predominance of households with wage-earners at the bottom end; and, at the top end, to the fact that proportional contributions do not apply above certain income ceilings. [67]

Taken together, direct taxes and social security contributions are not far from proportional to income for the majority of households. At the bottom end, social insurance contributions are not very important; at the top end the regressiveness of contributions is just counterbalanced by the progressiveness of direct taxation.

A comparison of indirect taxes with original income (and especially with the "original" income of pensioners having possibly no original income at all) is meaningless; and it is not surprising to find ratios considerably above 100 per cent of earned income.[68] If these special cases

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[63a] That the progressive effect is large at the extremes of the income scale is confirmed by A.J. Merrett and D.A.G. Monk, "The Structure of United Kingdom Taxation 1962-1963", *Bulletin of the Oxford Institute of Economics and Statistics*, August 1966.

[64] As measured by Gini coefficients, incomes after redistribution in 1959 showed 25.1 per cent inequality compared with 32.1 per cent before redistribution (see J. L. Nicholson, "Redistribution of Income in the United Kingdom in 1959, 1957 and 1953", in *Income and Wealth (op. cit.)*. The comparison with 1937 has been made by Mr. Nicholson on the basis of T. Barna, *Redistribution of Incomes through Public Finance in 1937*, Oxford 1945.

[65] Schmidt, Schwarz and Thiebach, *Die Umverteilung des Volkseinkommens in der Bundesrepublik Deutschland 1955 und 1960*, Tübingen 1965.

[66] Comparison with the corresponding figures for the United Kingdom is difficult; the British investigation excludes both the wealthiest families and the (mostly poor) households where more than three-quarters of the income is derived from social security benefits; the west German study includes all households, many of which, of course, have no income from employment and property.

[67] The ceiling depends on the type of insurance and on the social group (differing for wage-earners, salaried workers, civil servants and the self-employed).

[68] Since indirect taxes are taxes on expenditure, it would be more correct to compare them with disposable income. However, to discover the incidence of all taxes on households in various income groups, the basis of reference has to be unique. Since it would be even more misleading to compare income-taxes and social security

TABLE 6.17

Western Germany : Taxes and benefits as a percentage of household income from employment and property, 1960

Percentages

	Ranges of income from employment and property, DM per year													
	0 up to less than 1 200	1,200-2 400	2 400-3 600	3.600-4 800	4 800-6 000	6 000-7 200	7 200-8 400	8 400-9 600	9 600 12 000	12 000-15 000	15 000-18 000	18 000-24 000	24 000 and above	Total
Taxes														
1. Direct taxes	4.6	4.7	4.8	4.5	4.4	3.5	4.0	4.5	5.1	6.2	7.6	9.5	17.2	9.0
2. Social insurance contributions	7.2	13.7	15.4	16.4	16.7	20.2	20.0	19.9	18.7	18.4	14.5	12.6	6.6	14.3
3. = 1 + 2	11.8	18.4	20.2	20.9	21.1	23.7	24.0	24.4	23.8	24.6	22.1	22.1	23.8	23.3
4. Indirect taxes less subsidies	160.9	71.8	50.3	36.6	27.9	17.5	17.3	17.4	16.9	16.7	16.3	15.4	10.7	16.9
5. = 3 + 4 (all taxes less subsidies)	172.7	90.2	70.5	57.5	49.0	41.2	41.3	41.8	40.7	41.3	38.4	37.5	34.5	40.2
Benefits														
6. Transfer incomes (cash)	748.4	286.9	177.9	108.4	64.3	13.5	12.6	12.3	10.7	10.4	7.1	6.1	4.0	17.1
7. Transfer incomes (cash) minus taxes (6-5)	575.7	196.7	107.4	50.9	15.3	—27.7	—28.7	—29.5	—30.0	—30.9	—31.3	—31.4	—30.5	—23.1
Number of households (percentage distribution)	16.5	3.7	2.4	2.4	2.6	6.7	7.3	8.2	12.9	13.2	9.0	8.4	6.7	100.0

Source: Die Umverteilung des Volkseinkommens in der Bundesrepublik Deutschland 1955 und 1960, Tübingen 1965.

are left out, the burden of indirect taxation appears to be only slightly regressive in western Germany for the remaining 70 per cent of households. It is only for families in the highest income groups that the ratio of indirect taxes to income declines considerably. The regressiveness is less in western Germany than in the United Kingdom, probably because of the smaller weight in western Germany of specific duties on drinks and tobacco.

Total tax incidence is thus strongly regressive at the lower end of the income ranges (where it is also less significant because of the importance of pensioners' households), but only slightly regressive for 70 per cent of households. The regressiveness continues even at the top income levels, where the progressiveness of direct taxation is not strong enough to compensate for the regressiveness of social security contributions and indirect taxes. This last point marks a contrast with the United Kingdom, where the steep increase of income-tax more than offsets the declining importance of indirect taxes. For households in the upper percentile groups, the curve showing the ratio of total taxes to income continues to have a downward slope in the case of western Germany, while it turns up in the case of the United Kingdom. This difference will be found again in considering overall redistribution in the two countries.

Obviously, social security benefits [69] weigh much more heavily in the lower income groups where they may constitute 100 per cent of disposable income; but within the group of families deriving most of their income from employment and/or property, only a slight progressiveness is found. It is only for households in the top income groups (roughly, the top twenty per cent) that the proportion of benefits to income falls rapidly. This also marks a difference from the United Kingdom, where the downward slope of the curve is somewhat smoother.

The net effect on the various income groups of all taxes and benefits can be seen in line 7 of Table 6.17. On balance, the poorest quarter of households benefit substantially. For those households who pay more than they receive, the net payment is roughly proportional to income (at between 28 and 31 per cent).

As a result of the redistribution process, the net disposable income (i.e. income plus benefits less direct and indirect taxes and social security contributions) of households below the median original income is substantially evened out. This point stands out more clearly from the following figures.

The lowest income group, virtually constituted by pensioners' households only, reaches after redistribution only half the average income of the following income groups; for the rest, however, the redistribution has a strong equalizing effect (indeed groups 3 to 5, numerically not important, find themselves in a more favourable situation after redistribution than the two following groups).

	Income from employment and property	*Number of households*	*Average income*	
		(as percentage of total)	*before*	*after*
			redistribution	
	DM per year		*DM per year*	
1.	0-1,200	16.5	443	2,993
2.	1,200-2,400	3.7	1,717	5,094
3.	2,400-3,600	2.4	3,000	6,222
4.	3,600-4,800	2.4	4,197	6,333
5.	4,800-6,000	2.6	5,396	6,222
6.	6,000-7,200	6.7	6,595	4,768
7.	7,200-8,400	7.3	7,801	5,562
8.	8,400-9,600	8.2	9,007	6,350
		49.8		

Source : op. cit., Table 31; and the ratios in line 7 of Table 6.18 in this chapte

Thus, in western Germany, a sizeable redistribution c original income takes place, chiefly in favour of nor active persons. But no substantial redistribution occur among the great majority deriving most of their incom from employment, entrepreneurship or property.

Taxes and cash benefits: Norway

Three major official studies on the incidence of taxatio have been made in Norway. The first one was made o the basis of family budgets for industrial workers i 1947/1948 and 1951/1952.[70] This study was brough up to date on the basis of tax rates existing at the en of 1958 and supplemented with the preliminary result of the household survey for 1958.[71] The third investiga tion, of which the purpose is quite different, refers t 1960.[72]

The object of this third study is to establish the incidenc on households, of different composition and incom of the existing (1960) system of taxes, subsidies an benefits. This is not done (as in the British and we German investigations quoted above) by relating existin taxes, subsidies and benefits to the actual income patter Instead, the incidence of the existing system is compare with a purely hypothetical situation. The hypothetica situation is the replacement of all taxes and benefits b an equal proportional income-tax on every incom the tax being large enough to yield the same net revenu as all direct taxes, social security contributions an indirect taxes borne by households in 1960, less benefi and subsidies paid to households. This hypothetical ta would, in fact, be 24 per cent of income.[73]

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contributions with disposable personal income, the solution has been — in this as in other investigations of this kind — to compare indirect taxes with original (primary) income.

[69] Excluding, as mentioned before, benefits in kind which constitute 18 per cent of total benefits.

[70] Samfunnsøkomiske Studier No. 1, *The Effects of the Norwegi Tax System on the Personal Income Distribution*, Central Bureau Statistics, Oslo 1954.

[71] The study is published in an appendix to ST.PRP. No. 5 1960/61 with the title "Report on the General Sales Tax from t Purchase Tax Commission of 1959" (in Norwegian).

[72] Samfunnsøkomiske Studier No. 15, *Statistical Tax Inciden Investigation 1960*, Central Bureau of Statistics, Oslo 1960. Pre minary figures were published in ST.MELD. No. 54, 1960/6 Appendix 1, and an analysis given on pp. 31-35 which has be reproduced in the final publication, SØS No. 15, as Appendix pp. 49-55.

[73] This procedure is that first suggested by Professor Musgra "Distribution of Tax Payment by Income Groups: a case study f 1948", *National Tax Journal*, March 1954.

TABLE 6.18

Norway: Differential tax in 1960 according to income and family size, percentage of (pre-tax) income

Income groups (Yearly income in kroner)	Size of family							
	Single	Married couples with no children	Married couples with one child	Married couples with two children	Married couples with three children	Married couples with four or more children	Other families	All families
100- 3 999	—18.6	—55.6	—41.4	..	..	..	—31.8	—26.0
4 000- 7 999	5.6	—21.2	—13.0	—18.6	—24.0	..	— 5.9	— 2.3
8 000-11 999	13.5	— 1.7	— 0.1	— 8.1	—15.0	—27.0	— 2.8	2.2
12 000-15 999	15.1	6.7	2.1	— 4.8	— 8.3	—22.5	— 0.9	2.1
16 000-19 999	16.4	10.5	5.2	— 2.8	— 7.0	—17.4	5.4	4.3
20 000-23 999	19.1	14.3	7.4	0.9	— 4.4	..	3.7	6.6
24 000-31 999	17.5	14.4	10.5	5.5	0.7	..	8.0	8.9
32 000-39 999	...	14.3	9.9	10.6	10.2	..	12.0	11.7
Over 40 000	33.9	38.0	..	21.4	24.7	..	31.3	30.9
Total	13.8	10.4	4.8	— 0.1	— 2.3	—12.5	10.1	7.1[a]

Source: Samfunnsøkomiske Studier No. 15, *Statistical Tax Incidence Investiga-n 1960*, Central Bureau of Statistics, Oslo 1960, p. 93.

[a] This figure is different from zero largely because farmers and fishermen are not included in the detailed analysis.

The logic of the hypothetical situation is carried into e changes in relative prices and expenditure patterns at would follow from an abolition of indirect taxes nd subsidies and from the consequent change in the istribution of disposable income. From the analysis of ctual consumer budgets and computations of price asticities, estimates are made of the hypothetical xpenditure pattern, for each group of families, corres-onding to the hypothetical tax/benefit situation. Because the expenditure patterns are also hypothetical, e data do not yield estimates of the *existing* incidence f indirect taxes or subsidies which can be compared ith those quoted above for other countries.)

For families of each income size and of varying composition, the hypothetical situation is compared with the existing system. The differences are displayed (in Table 6.18) in the form of positive or negative "differential taxes", expressed as percentages of pre-tax income. A positive differential of X per cent indicates that a given family would have to receive a tax refund, equal to X per cent of its income, under the hypothetical flat rate 24 per cent tax to be as well-off as it is under the existing system. A negative differential of Y per cent indicates that a given family would have to pay Y per cent more of its income in net taxes than the hypothetical 24 per cent tax in order not to benefit from the change.

TABLE 6.19

Norway: Direct taxes, social contributions, and transfers as a percentage of household income before tax, 1960

Percentages

	Income groups, N.Kr. per year									
	100- 3 999	4 000- 7 999	8 000- 11 999	12 000- 15 999	16 000- 19 999	20 000- 23 999	24 000- 31 999	32 000- 39 999	40 000 and above	Total
axes										
1. Direct taxes	6.8	10.3	11.8	11.7	12.7	13.8	16.3	19.1	35.7	15.6
2. Social security contributions	10.6	8.9	7.1	5.9	5.2	4.8	4.2	3.7	2.2	5.1
Total	17.4	19.2	18.9	17.6	17.9	18.6	20.5	22.8	37.9	20.7
Transfer incomes (cash)	31.0	9.5	4.6	3.3	2.2	1.4	1.0	1.0	0.4	2.7[a]
Transfer incomes minus taxes	13.6	— 9.7	—14.3	—14.3	—15.7	—17.2	—19.5	—21.8	—37.5	—18.0

Source: Samfunnsøkonomiske Studier, No. 15, *Statistical Tax Incidence Investi-tion 1960*, Central Bureau of Statistics, Oslo 1960. The distribution of the number households by size of income is not available.

[a] Note that old-age pensioner households are excluded from the table.

It should be noted that the pre-tax income used is original income excluding transfer incomes. The transfer incomes included in benefits (under the existing situation) omit, however, several forms of transfer payment (reimbursement of doctors' fees, unemployment benefits, etc.). Moreover, households of old-age pensioners are excluded from the whole investigation. Price subsidies for milk and milk products and flour, the most important items of subsidized consumption, are included, reflecting the fact that their prices are regarded as policy-determined.

Table 6.18 serves to demonstrate the marked progressiveness of the existing tax/benefits system for families of a given composition. It also shows how the net tax ratio decreases with size of family. The net effects of the increase in the tax ratio with income, and its decline with size of family, are smoothed out when families of all compositions are added together (in the last column of the table). This is largely because the effect of the rising tax ratio with income within each family-type is offset by the fact that family income tends to increase with family size.

From the data in the Norwegian study it is also possible to display directly the net effects, on families of different income size, of existing direct taxes, social contributio
and of those transfer incomes which are included. This
done in Table 6.19. For reasons given above, the inciden
of indirect taxes and subsidies cannot be estimated fro
this material.[74]

It can be seen (ignoring here the important influen
of family size) that direct taxes are fairly progressiv
the degree of progression is considerably understated
the table since all groups with an annual income
40,000 kroners and above are pooled. The table confirm

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[74] In the study mentioned in footnote 71, page 32, the actu
incidence of indirect taxes and subsidies is given for different typ
of wage-earners' households in 1958. Though the figures are asso
ated with a certain statistical uncertainty, because they were based
a small sample and rather unsatisfactory materialin other respec
the following comment may be quoted: "the general turnover tax
a regressive element in the tax system . . . the subsidies have
progressive effect and the specific duties may on the basis of t
present material rather be characterized as proportional. It shou
be noticed that the results for the specific duties are particular
doubtful because consumption of goods which are typically tax
through specific duties (alcoholic drinks, tobacco, cars, etc.)
presumably under-represented in the statistical material". "
roughly speaking (total) indirect taxation may be characterized
proportional with income". *(Op. cit.*, p. 22.)

TABLE 6.20

Net effect of family allowances and income-tax in five western European countries at different income levels and family si (in 1962)

Country and income level (in US dollars)	Income-tax less family allowances as a percentage of gross annual income						Incremental tax-benefit effect as a percentage of original income[a]				
	Single	Man/wife	1 child	2 children	3 children	6 children	Man/wife	1 child	2 children	3 children	6 childre
Belgium											
1 500	— 4.9	— 4.4	+ 2.9	+ 11.5	+ 28.4	+ 73.0	0.5	7.3	8.6	16.9	44.6
2 000	— 7.5	— 7.2	— 1.5	+ 5.7	+ 16.5	+ 54.7	0.3	5.7	7.2	10.8	38.2
2 500	— 9.6	— 9.1	— 4.3	+ 1.5	+ 10.9	+ 43.8	0.5	4.8	5.8	9.4	32.9
France [b]											
1 500	— 4.6	0	0	+ 10.1	+ 25.2	+ 73.3	4.6	0	10.1	15.1	48.1
2 000	— 6.1	— 1.1	0	+ 7.6	+ 18.9	+ 54.9	5.0	1.1	7.6	11.3	36.0
2 500	— 7.8	— 3.5	— 1.2	+ 6.0	+ 15.1	+ 44.0	4.3	2.3	7.2	9.1	28.9
Western Germany											
1 500	— 10.0	— 4.4	— 0.4	+ 5.0	+ 13.0	+ 37.0	5.6	4.0	5.4	8.0	24.0
2 000	— 11.8	— 7.6	— 4.6	— 0.4	+ 6.0	+ 24.0	4.2	3.0	4.2	6.4	18.0
2 500	— 13.7	— 10.0	— 7.6	— 4.3	— 0.7	+ 19.2	3.7	2.4	3.3	3.6	19.9
Italy											
1 500	— 4.0	— 3.8	+ 2.6	+ 9.0	+ 15.4	+ 34.9	0.2	6.4	6.4	6.4	19.5
2 000	— 5.4	— 5.3	— 0.5	+ 4.4	+ 9.3	+ 24.1	0.1	4.8	4.9	4.9	14.8
2 500	— 6.3	— 6.2	— 2.4	+ 1.5	+ 5.4	+ 17.1	0.1	3.8	3.9	3.9	11.7
Netherlands											
1 500	— 12.9	— 8.5	— 3.0	+ 3.2	+ 9.3	+ 32.4	4.4	5.5	6.2	6.1	23.1
2 000	— 16.1	— 11.0	— 6.4	— 1.6	+ 3.4	+ 21.4	5.1	4.6	4.8	5.0	18.0
2 500	— 19.0	— 13.4	— 9.5	— 5.3	— 1.2	+ 13.8	5.6	3.9	4.2	4.1	15.0

Source: Communauté Économique Européenne, *Conférence européenne sur la sécurité sociale* (Brussels, December 1962), Vol. II.

[a] Difference of each percentage reported on the left-hand side of the table from the preceding percentage. For instance, in Belgium — at an income level of $1 500 per year — when a man gets married, his fiscal burden is reduced by 0.5 per cent as compared with his fiscal burden when single. When he has a child, his fis
burden is reduced by 7.3 per cent compared with his fiscal burden before the ch
(married couple without children); and so on.

[b] For France, the "allocation de salaire unique" is excluded.

e relatively high ratio of income-tax for households ith low incomes, which is largely determined by the elatively high taxation of small households (consisting f one, two or three persons only).

Social security contributions are highly regressive in espect to income. This is connected with the fact that ontributions paid by individuals are fixed for rather road income groups, are slightly regressive from lower higher income groups and become flat rates above a ertain relatively low income level. Direct taxes and social ecurity contributions taken together give an almost roportional total ratio, with the exception of the three ighest income groups where the progression is still ather pronounced.

Since, as already mentioned, a number of transfer ncomes are not taken into account, the "benefit side" f the redistribution process is reduced to very small roportions. On this basis, only for the lowest income roup are transfer incomes of real importance, constitu-ing almost one-third of total income. Transfer payments ccount for no more than 10 per cent of "original" ncome in the second lowest income group, and the atio is gradually reduced to less than 1 per cent in the ighest income group.

amily size

Fiscal advantages to large families constitute a form of horizontal) income redistribution. Not only family llowances but also effective income-tax rates change vith the family size for taxpayers of equal income level. he net result of these two changes is a redistribution of ncome in favour of large families. For five western uropean countries, the combined advantages of family llowances and of tax exemptions are shown in Table 6.20. n Belgium, for instance, a single taxpayer, with an annual ncome of $1,500, pays 5 per cent of his income for ncome-tax. With six children, he receives family allow-nces equal to 73 per cent of his earnings and does not ay income-tax. The table shows that Belgium and France ollow much more generous policies for large families than the other three countries; moreover, the French figures exclude the so-called "allocation de salaire unique".[75] The right-hand side of the table shows the net fiscal advantage associated with an increase of one member in the family. For the first child, for instance, the net fiscal advantage is 7.3 per cent in Belgium but zero in France (excluding the *allocation de salaire unique*). It would have been interesting to compare the net fiscal advantage given by present legislation with the increasing costs associated with larger families. The comparison has been precluded by lack of suitable data, but it would be surprising if the extra costs were less than the incremental benefits in most of the cases reported in Table 6.20. In other words, the fiscal advantage given to bigger families helps them to meet a part of the extra cost involved, but does not constitute, in most cases, a premium for large families.

In the United Kingdom, the net incremental fiscal benefit is bigger than in the five countries listed in Table 6.20 for the wife but smaller for the children, and tax exemptions are more important than family allowances. For three levels of income, the incremental tax-benefit advantage was as follows in 1965:

	Percentages (annual assessed earned income)		
	£780	*£1,040*	*£1,400*
Single	—	—	—
Man/wife	16.0	12.0	5.2
1 child	6.9	6.3	2.8
2 children	7.9	7.2	3.3
3 children	4.1	5.8	2.9
4 children	3.4	5.0	3.4
5 children	3.3	3.5	3.3
6 children	3.3	2.3	3.0

6.3 THE ROLE OF SOCIAL SECURITY IN INCOME REDISTRIBUTION

Previous sections have emphasized the increasing ignificance of social security contributions and benefits s a characteristic feature of recent developments in ncome redistribution. The purpose of the present section s to examine the influence of social security in rather nore detail. The variety and complexity of the various chemes make it impossible to survey them all, but four ountries were selected for analysis: Austria, France, vestern Germany and the United Kingdom. The social ecurity systems in these countries are believed to be airly representative of the different types of schemes xisting in western Europe. This section is based on a pecial analysis kindly prepared by the International abour Office.[76] It examines the relationship between contributions, benefits and earnings, for families of different composition and at different levels of normal earnings, the benefit data being for spring 1965. The analysis brings out the extreme complexities of the redistributive elements embodied in social security schemes.

Social security benefits may be either short-term or long-term. For short-term benefits, the right to benefit is acquired over a relatively short period and there is, practically, an instant relationship between contributions and benefits. The right to a long-term benefit is usually

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[75] This allowance is given to families with a non-working wife. It is related to the "average departmental wage", and goes from 12 per cent (of the average departmental wage) in the case of one child more than 5 years old, to 20 per cent when the child is less than 5, to 40 per cent for two children, and to 50 per cent for three or more children. (See "Données statistiques sur l'évaluation des rémunérations sociales de 1938 à 1963", *Études et Conjoncture*, August 1965, p. 87.)

[76] The complete study is entitled "Income Redistribution through ocial Security in western European Countries", D. 12, 1966, ILO, Geneva. For an earlier analysis see the study by the ILO for the European Economic Community (EEC, *Série Politique Sociale*, N° 4) covering the Community members and the United Kingdom. For a similar study for Austria, see *Soziale Sicherheit*, 1964, January to April.

TABLE 6.21

All short-term social security benefits as a percentage of earnings[a] in four western European countries

Category by assumed earnings	Austria		France		Western Germany		United Kingdom	
	Gross benefits[b]	Net benefits[b]	Gross benefits[b]	Net benefits[b]	Gross benefits[b]	Net benefits[b]	Gross benefits[b]	Net benefits
75 per cent of reference earnings								
Single man	6.33	—11.35	8.89	—21.22	7.05	—5.19	4.50	1.33
Man and wife	9.70	—7.67	15.01	—15.10	9.68	—2.58	8.25	5.08
Man/wife/2 children	27.48	10.22	42.38	12.27	13.46	1.22	16.71	13.54
Man/earning wife	7.67	—9.44	10.46	—19.65	7.92	—4.47	6.37	2.48
100 per cent of reference earnings								
Single man	4.95	—10.78	7.86	—22.09	5.47	—4.17	3.39	1.02
Man and wife	7.55	—7.84	12.54	—17.41	7.55	—2.09	6.23	3.86
Man/wife/2 children	21.00	5.69	33.16	3.21	10.40	0.76	12.58	10.21
Man/earning wife	6.21	—9.82	8.94	—21.07	6.52	—4.29	4.80	1.87
150 per cent of reference earnings								
Single man	3.42	—9.94	5.93	—14.01	3.87	—3.07	2.26	0.67
Man and wife	5.21	—7.93	9.12	—10.82	5.38	—1.56	4.15	2.56
Man/wife/2 children	14.19	1.05	22.90	2.96	7.30	0.36	8.38	6.79
Man/earning wife	4.57	—9.49	6.91	—17.02	4.78	—3.35	3.20	1.25
200 per cent of reference earnings								
Single man	2.56	—9.25	4.76	—10.23	3.06	—2.52	1.69	0.48
Man and wife	3.91	—7.68	7.18	—7.81	4.29	—1.29	3.11	1.90
Man/wife/2 children	10.65	—0.94	17.52	2.53	5.75	0.17	6.30	5.09
Man/earning wife	3.56	—9.02	5.47	—12.77	3.77	—2.71	2.39	0.93

Source: International Labour Office.

[a] Short-term benefits include family allowances, medical care, maternity benefits, sickness benefits, death grants, employment injury, and unemployment insurance benefits. 100 per cent of reference earnings is the average annual full-time rate of earnings of either male or female wage- and salary-earners, excluding agricultu and the armed forces, in the spring of 1965.

[b] Net benefits are equal to the difference between gross benefits and (employer a employee) contributions.

acquired over a long period of time and in most cases the benefit becomes greater as the years of insurance increase. The first part of the section is concerned with an analysis of short-term benefits. Included in this group of benefits are family allowances, medical care, maternity benefits, sickness benefits, death grant, employment injury and unemployment insurance benefits. The second part relates to long-term benefits: old-age, invalidity and survivors' pensions.[77]

Short-term benefits

Table 6.21 shows the ratio of all short-term social security benefits to different levels of earnings, and, at each level of earnings, for different types of families. These ratios are shown both for gross and for net benefit net benefits being equal to gross benefits less employee and employers' contributions. The estimates of benefi

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[77] The distinction between short-term benefits and pensions may not be as sharp as the terms suggest. For example, a pension element may occur in a sickness insurance scheme. In the United Kingdom, for example, sickness benefits are payable for an indefinite period. In this section all sickness benefits are considered to be short-term benefits. Invalidity and survivors' pensions arising from employment injury have been included in short-term benefits. The reason is that while benefits may be paid for a long period, the amount of benefit is generally related to earnings at the time of the injury or shortly before. Moreover, an employee becomes eligible for benefit after a relatively short period of membership; in the case of employment injury benefit there is usually no qualifying period. This section examines only general statutory social security schemes. As a rule the same definitions are used as those in the ILO inquiries on the cost of social security.

[78] For short-term benefits in the four countries selected, estimat of average annual benefits for each type of benefit have been mad These benefits have been calculated at four different national wag salary levels. These four earnings levels are described througho this section as percentages of "reference earnings": 75 per cer 100 per cent, 150 per cent and 200 per cent. Thus, 100 per cent reference earnings is the appropriate average annual full-time rate earnings of adult male, or female, wage- and salary-earners, exclu ing agriculture and the armed forces, in the spring of 1965. T figure is the gross average annual wage or salary before deductin taxes or social security contributions. It does not include fami allowances or any other state benefits. These earnings for male ar female employees are as follows:

Average annual wages and salaries for male and female employees

Country	*Percentage of reference earnings*			
	75	*100*	*150*	*200*
Austria (Sch.)				
Male	35,500	47,000	70,500	94,000
Female	22,000	29,500	44,500	59,000
France (NF)				
Male	9,250	12,300	18,450	24,600
Female	5,950	7,900	11,850	15,800
Western Germany (DM)				
Male	8,250	11,000	16,500	22,000
Female	6,250	7,000	10,500	14,000
United Kingdom (£)				
Male	790	1,050	1,575	2,100
Female	375	500	750	1,000

made, wherever appropriate, by calculating the erage number of days in a year for which benefits of ch type were paid per insured person. A figure of per cent implies that that type of family receives an ount equal to 10 per cent of its normal annual earnings short-term benefits if it has *average* experience of gibility for benefits for sickness, unemployment, ternity, etc. (including, it must be said, average probaity of becoming eligible for death benefit). The contritions are more difficult to allocate between short- and g-term benefits, since there may be no formal allocation contributions between the different branches: in this se, contributions are allocated proportionately to nefit expenditure in 1962.

Gross short-term benefits are higher in France than the other three countries, at all income levels and for y type of family; but it is for a family with two children at the difference becomes most marked. At the other treme is the United Kingdom, where the level of gross nefits is lower than in the other three countries. It is ly for a married couple with two children that British nefits exceed those in western Germany at any income nge, since family allowances are particularly modest western Germany. The level of gross benefits is rather milar in Austria and in western Germany, except that a mily with two children receives more in Austria.

In all four countries the level of benefits is inversely sociated with the level of income: the higher the income, e lower the ratio of benefits to income. In all four untries, and in any income range, a family with two ildren receives the highest level of benefits, followed "man and wife", "man and earning wife" and ingle man". Briefly, the level of benefits is positively sociated with the size of families and, if larger families an those with two children had been included, it would ve appeared that the level of benefits is particularly gh for large-size families.

The relative reduction in benefits, as earnings increase, somewhat different in the four countries. It is naturally eeper in the United Kingdom because of the flat rate stem whereby benefits are not dependent on income.[79] ut in the other countries, too, the principle that benefits ould rise with normal earnings does not apply to many the short-term benefits (nor to the contributions), and here it applies the ceiling above which the benefit rate creases no further is fairly low in relation to the present ale of earnings. In Austria, the degree of reduction seems balance to be somewhat greater than in either France western Germany. In these two countries, the ratio of enefits to income falls by about 50 per cent when ssing from the lowest to the highest income group; e decline is, however, somewhat bigger in the case of a arried couple with two children. In the United Kingdom, e decline is of nearly two-thirds and Austria stands etween. Inter-country differences are, however, rather odest. In addition, some at least of the short-term enefits are normally independent of income; for instance, expenditure for pharmaceutical products and for surgical operations. Medical care, it will be recalled, is by far the most important category of all short-term social security benefits. Thus the short-term social benefits in all these countries have a quite strong progressive effect.

When gross benefits are compared with total employee and employers' contributions, it is striking that in Austria, France and western Germany benefits are less than contributions for most categories of families and at each earnings level for all categories except families with two children.[80] In effect this means that, on balance, for families with average experience of the various contingencies, those with two or more children are being financed by the rest. A family with three children receives in all countries shown in Table 6.21 (and in most other western European countries as well) considerably bigger benefits — at all earnings levels — than a family with two children; and the progression rises steeply for even bigger families.[81]

By contrast, in the United Kingdom — where benefits are financed by taxation to a larger extent than in the other three countries — benefits received are greater than total contributions for all categories of insured persons at all earnings levels. For instance, at 100 per cent of reference earnings, a man with a wife and two children receives as total net benefits about 10 per cent of earnings. But in the United Kingdom, as elsewhere, it is the families with children who are the main net beneficiaries.

Lastly, it can be seen from Table 6.21 that the tendency for benefits to decline relatively to income, as the earnings level increases, is much less apparent for net than for gross benefits. Only in the United Kingdom is the movement about the same since the flat rate structure results in the same ratio of benefits to contributions at all earnings levels. In Austria, by contrast, the net benefit for a man and earning wife remains about the same in relation to income at any earnings level. In the case of a single man the reduction is very modest. In France, net benefits do not decline at all when passing from 75 per cent to 100 per cent of reference earnings for a single man, man and wife, and man and earning wife. The intricate mechanism of contributions and benefits at different income levels and for various categories of insured persons, which is at the origin of such "anomalies", cannot be examined here. It is sufficient to recall that there is no close correspondence between contributions and benefits and that in some cases benefits decline with income less rapidly than contributions.

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[79] Elements of wage-related benefits are now being introduced in e United Kingdom.

[80] Even this category receives less benefits than contributions in Austria at the top earnings level. On the other hand, short-term social security benefits exceed *employees'* contributions in all four countries for all categories of insured persons at all earnings levels. The only exception is the case of a single man in Austria at 200 per cent of reference earnings, where employees' contributions exceed benefits.

[81] For an illustration of this point for the countries of the European Economic Community, see CEE, *Conférence europeénne sur la sécurité sociale*, Brussels, December 1962, especially Volume II.

TABLE 6.22

Old-age gross benefits[a] by category of insured, by earnings and by years of insurance in four western European countri

Category by assumed earnings	Benefits after 30 years of insurance as a percentage of earnings				Benefits after 30 years of insurance				Benefits after 40 years of insurance			
					Indices							
					75 per cent of reference earnings = 100				Benefits after 15 years of insurance = 10			
	Austria	France	Western Germany	United Kingdom	Austria	France	Western Germany	United Kingdom	Austria	France	Western Germany	Unite Kingdo
75 per cent of reference earnings												
Single man . . .	57	40	45	35	100	100	100	100	178	200	267	124
Man and wife . .	57	60	45	52	100	100	100	100	150	200	267	115
Man/wife/2 children	74	83	63	66	100	100	100	100	134	157	193	112
Man/earning wife	57	32	45	42	100	100	100	100	155	200	267	113
100 per cent of reference earnings												
Single man . . .	57	40	45	29	133	133	133	111	178	200	267	132
Man and wife . .	57	60	45	42	133	133	133	108	178	200	267	122
Man/wife/2 children	71	77	58	53	127	123	124	106	165	163	205	117
Man/earning wife	57	32	45	34	133	133	133	108	176	200	267	119
150 per cent of reference earnings												
Single man . . .	52	27	39	20	183	133	175	111	178	200	267	132
Man and wife . .	52	40	39	28	183	133	175	108	178	200	267	122
Man/wife/2 children	63	51	48	35	170	123	154	106	168	163	215	117
Man/earning wife	54	24	42	24	190	149	184	117	178	200	267	126
200 per cent of reference earnings												
Single man . . .	39	20	29	15	183	133	175	111	178	200	267	132
Man and wife . .	39	30	29	21	183	133	175	108	178	200	267	122
Man/wife/2 children	48	38	36	26	170	123	154	106	168	163	215	117
Man/earning wife	46	18	36	19	215	150	210	124	178	200	267	130

Source: International Labour Office.

[a] Benefits include family allowances but family allowance contributions are not conside

Long-term benefits[82]

Long-term benefits are defined to include old-age pensions, and invalidity and survivors' benefits. The structure of old-age pensions is summarized in Table 6. while Table 6.23 provides a similar picture for invalidi and survivors' benefits. For these long-term benefits, t annual rate of benefit is shown as a percentage of annu earnings before retirement.

The first part of Table 6.22 shows the level of old-a pensions as a percentage of earnings, at different lev earnings and for different family size, after 30 years insurance. Long-term benefits are more closely related earnings than are most short-term benefits in Austria, ance and western Germany [82a]. In France, however, the nsion rate does not increase for pensioners who earned ore than 100 per cent of reference earnings, and in ustria and western Germany above 150 per cent e the central part of Table 6.22). Thus everywhere e ratio of pension to previous earnings falls steeply r those who were earning much above the average.

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[82] The basic rates of contribution for long-term social security benefits in Austria, France, western Germany and the United Kingdom may be summarized as follows:

Austria: The contribution rate for employees in Austria is 7.5 per cent of earnings up to the contributory earnings ceiling of 64,800 schillings per year. This ceiling is the same as that applied for employer contributions under the employment injury scheme but is 80 per cent higher than the contributory earnings ceiling for medical care, maternity, sickness, death and unemployment benefits. The rate of contribution for long-term benefits is 2.2 times greater than the average rate for medical care, maternity, sickness and death benefits.

France: In France, the basic contribution for social insurance covers both long- and some short-term benefits.

Western Germany: In western Germany, as in Austria, long-term benefits have a separate contribution rate. The contributory earnings ceiling of 14,400 DM is higher than for medical care, maternity, sickness, death and unemployment benefits but lower than the ceiling for employment injury. The contribution rate for lo term benefits in western Germany is 43 per cent higher than average rate for medical care, maternity, sickness and death benef

United Kingdom: Contribution rates are of two different typ There is the contribution at flat rates for National Insurance wh covers both long-term and short-term benefits. There is also graduated contribution which is made in respect of the gradua pension schemes. This is fixed at the rate of 4.5 per cent on t part of an employee's weekly earnings which is between £9 and £

The minimum pension age varies somewhat between the countr The calculations have been done on the basis of a pensionable age 65 for men and 60 for women.

Pensions (after 30 years of insurance) are highest in lation to income, in most circumstances, in Austria. ney are practically 40 per cent of previous earnings at orst, and can exceed 70 per cent (in the unusual case of nsioners with two dependent children). In France and estern Germany, the ratios to income are generally mewhat less, especially, in most circumstances, in the west and top income groups; in France, the ratio falls 20-30 per cent in the top group (where there are no ependent children). In western Germany and Austria ensions continue to rise after the 30-year insurance period is reached, while the 30-year period constitutes a ceiling in France. While French short-term benefits are the most generous among the four countries examined, the Austrian and west-German old-age pension schemes seem to be rather more favourable than the French.

Old-age pensions are relatively low in the United Kingdom because of the flat-rate system. They naturally compare most favourably in the lowest earnings group, but at the average earnings level and above in all cases show a greater fall from the pre-retirement earnings level — in some circumstances a much greater fall — than the schemes in the other three countries. This is one reason for the widespread adoption of various private superannuation schemes in the United Kingdom.

The extent to which old-age pensions depend on the number of years of insurance is shown in the right-hand section of Table 6.22. Years of insurance is an important factor in the three continental countries but not, to any great degree, in the United Kingdom. Thus in western Germany, where extra years of insurance make the biggest difference, the pension after 40 years can be nearly three times as great as after 15 years.

Finally, Table 6.23 shows the structure of invalidity and survivors' benefits. Invalidity benefits tend to be highest in Austria and lowest in the United Kingdom;

TABLE 6.23

Invalidity and survivors' gross benefits by category of insured and by earnings in four western European countries

Category by assumed earnings	Benefits after 15 years of insurance as a percentage of earnings							
	Invalidity benefits [a]				Survivors' benefits [a]			
	Austria	France	Western Germany	United Kingdom	Austria	France [b]	Western Germany	United Kingdom [c]
per cent of reference earnings								
Single man	50	50	45	26	—	—	—	—
Man and wife	50	50	45	43	35	—	9	9
Man/wife/2 children	67	73	63	58	72	23	54	55
Man/earning wife	—	—	—	—	—	—	—	—
)0 per cent of reference earnings								
Single man	50	50	45	20	—	—	—	—
Man and wife	50	50	45	32	26	—	9	7
Man/wife/2 children	64	67	58	43	54	17	49	42
Man/earning wife	—	—	—	—	—	—	—	—
50 per cent of reference earnings								
Single man	46	33	39	13	—	—	—	—
Man and wife	46	33	39	21	23	—	8	5
Man/wife/2 children	56	45	48	29	47	12	40	28
Man/earning wife	—	—	—	—	—	—	—	—
00 per cent of reference earnings								
Single man	34	25	29	10	—	—	—	—
Man and wife	34	25	29	16	17	—	6	3
Man/wife/2 children	42	34	36	22	35	9	30	21
Man/earning wife	—	—	—	—	—	—	—	—

Source: International Labour Office.

Benefits include family allowances but family allowance contributions are not considered. For a man and earning wife benefits are not shown because the contingency is assumed not to occur to both at the same time.

[b] Pension payable only if widow is invalid or over age 65. Only family allowance benefit is shown.

[c] For the category of man and wife, benefit is paid only for first 13 weeks after 5 and 15 years of insurance on the assumption that the wife was age 20 when her husband became insured.

[82a] This is partly because short-term benefits include family owances and medical care benefits in kind, which are not wage lated.

survivors' benefits are particularly modest in France. However, differences between invalidity and survivors' pensions in the same country are striking. In western Germany, for instance, at 75 and 100 per cent of reference earnings, if a man becomes an invalid (assuming no children) his pension represents 45 per cent of earnin after as few as five years of insurance. If, however, insured male dies after five years of insurance, his wi would receive a survivor pension equivalent to on 3 per cent of his earnings.

6.4 SUMMARY

The insistence throughout this chapter on deficiencies of information and conceptual ambiguities is reflected in the tentative nature of the conclusions.

First, the major redistribution flows were examined. Total taxes, including social security contributions, are equivalent to a proportion of gross national product ranging from 30 to 35 per cent in most western European countries. The share of indirect taxes in the total fiscal revenue is surprisingly similar, ranging from 40 to 50 per cent. Marked differences are apparent in the relative importance of direct taxes on income and capital, to a certain extent offset by opposite differences in social security contributions. In France, for instance, social security contributions are high and income-tax is low; the contrary is true of the United Kingdom and, still more, of Norway and Sweden.

In all western European countries the share of gross national product represented by taxation rose gently from 1953-1955 to 1962-1964, except in the United Kingdom. In most countries, this increase in total government revenue was largely the result of rising social security contributions: their share in total taxation more than doubled in Norway and more than trebled in Sweden. As a share of household primary income, direct taxes rose moderately everywhere, except in Austria. Because of the rise in money incomes, and of the progressiveness of income-tax rates, the moderation of the increase in revenue represented a general reduction in income-tax rates. Direct taxes paid by corporations, expressed as a share of total taxes, rose only in Switzerland and declined in all other countries. Their relative reduction was also the result of reductions in tax rates, associated perhaps with the fear that corporate saving might become inadequate in relation to investment needs.

The expenditure of general government has been divided so as to distinguish current transfers to households, public consumption on health and education ("collective" consumption) and current subsidies to enterprises; these are the outlays which can lead to a redistribution of income in favour of households. Their share of total current expenditure increased in all countries for which data could be assembled (partly because of declines in defence expenditure); in 1964 these outlays accounted for 50 to 60 per cent of the total. This "redistributive" expenditure has been added to the after-tax personal income of households so as to arrive at their "final income" (disposable income plus current subsidies plus collective consumption). Primary income, after taxes, constitutes between 72 per cent (France and Austria) and 80 per cent (the United Kingdom) of final income. Current transfers to households — essentially social security benefits — constitute the most important category of redistributed income.

Social security benefits are relatively higher as a sha of the primary income of the personal sector where th are largely financed by contributions from employe and employed rather than by taxes; in turn, when contr butions are high they are largely charged on employer There is a positive association between these thr elements: the amount of benefits, the amount of co tributions, and the share of contributions charged employers. The policy of raising social security reven through employers' contributions may appear the simpl way because it is administratively easier and encounte less resistance; its ultimate effect may well be simil to that of a tax on wages and thus be deprived of a dire redistributive effect. There is no positive correlation all between the volume of redistributed income and t degree of reduction in income dispersion.

Questions of income distribution and redistributi between households of different income size are taken in the second and third sections. Between the pre-w and immediate postwar years, there appears to have be some reduction in primary income dispersion but t factors reducing income inequality seem to have weaken considerably over the last decade or so. In this mo recent period, a reduction in income dispersion amo wage- and salary-earners appears to have taken pla only in Norway. In the other countries, the rece tendencies seem to have operated in the direction of widening of income dispersion, at least for wage- a salary-earners. Taking all households, a slight reducti in income dispersal has continued in some countri but not in all. Perhaps the major force leading to reduction of income inequality in the household sector a whole during the past 10-15 years has been the sh away from self-employment (a group with a high inco dispersion) into wage- and salary-earning. Broad speaking, households in the highest income groups ha suffered a deterioration in their relative position in number of countries, though not in all; yet at the sa time the income gap between the poorest groups and t middle income ranges has, if anything, increased.

To what extent did taxes and benefits change t dispersion of primary incomes? Income-tax is progressi in all countries though its degree of progression is mark chiefly at the two extremes of the income scale. There h been no increase in the degree of progression over t period under review in any country. Social security co tributions and indirect taxes both tend to be regressi The effects of indirect taxes are more difficult to asse in spite of their importance in household expenditure.

Studies have been made in a few countries to ascerta the incidence of indirect taxation on primary or disposa income of households at different income levels. The studies are not wholly comparable because of differe verage and definitions. However, it appears that indirect ation has in most countries a somewhat regressive ect when compared with original income (income before es and transfer payments) but perhaps more nearly oportional when related to disposable incomes for the jority of households. The degree of regressiveness is atively mild for households in middle income groups t particularly sharp at the two extremes of the income le. One reason for this is that the original progressive ect of many taxes on "luxuries" has been greatly luced. Of course, a strong differentiation of rates iong commodities subject to different income elasticities y help to reduce regressiveness; and price subsidies on, example, food introduce a progressive element. Such ce subsidies have, of course, disadvantages of their n, especially when, as is normally the case, they are ended to alleviate the cost of protection of domestic riculture.[83]

Thus, when all taxes (direct taxes *stricto sensu*, social curity contributions and indirect taxes) are taken into count, progressiveness tends to disappear, except, in me countries, at the top of the income pyramid; leed, for the great majority of households, the total tax stem tends to become regressive. But the systems of cial security benefits, in their turn, are in all countries strongly progressive as between income groups, and their progressive effect more than offsets the regressive nature of the taxation. Thus it is government expenditure, rather than the tax system seen as a whole, which is mainly responsible in practice for such redistribution as takes place.

The degree and the pattern of income redistribution varies between countries; but, broadly speaking, the reduction in income dispersion appears to be very modest among the bulk of households deriving their income from employment, self-employment and property. The redistribution which has occurred is largely in favour of non-active persons (principally pensioners) and has been largely financed by their own payments in the past, either by social insurance contributions or by general taxes.

On the whole, therefore, it seems legitimate to conclude that for the bulk of the population the pattern of primary income distribution is only slightly modified by government action. Structural changes — such as the falling share of agriculture in manpower distribution, and the reduction in self-employment generally — have probably had a more important influence on dispersion of final household incomes than government policies. One reason for this may be that the reduction of inequality (except at the extremes) has not recently been a significant objective of policy. Another reason may be that the combined effects on income distribution of the various forms of government action are rarely regarded as integrated parts of a single policy.

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[3] For a discussion on the various forms of agricultural subsidies d their implications, see ECE, *Economic Survey of Europe in 50,* Chapter III, "Some problems of agricultural development: stern Europe", especially section 2.

INCOMES IN EASTERN EUROPE AND THE SOVIET UNION

CHAPTER 7

TRENDS AND FACTORS IN THE GROWTH OF INCOMES OF POPULATION IN EASTERN AND THE EUROPE SOVIET UNION

This chapter provides a description of trends in the incomes of the whole population, and of its two socio-economic constituents — wage and salary workers, and peasants — in the period from 1950 to 1965.

Trends in incomes evidently cannot be treated in isolation from the mainstreams of economic policy and development, no matter what system is under study. The first two sections therefore deal with the contours of development policy — the strategy of growth — adopted by the countries of the area, and evaluate the role assigned to incomes policies in that context. The policy governing the allocation of resources between capital formation and consumption, and between the various elements of the latter, is of particular interest in this connexion, and in the first part of the chapter an attempt is made to identify, country by country, the main investment-consumption phases of postwar development.

That is followed by a discussion of the expansion and composition of total population incomes, and by an attempt to assess the impact of changes in population structure on the rate of growth of total population income. The next two sections take up, in turn, an analysis of factors behind the growth of incomes of wage-earners and of peasants. For the former category, a broad assessment is made of the relative weights of the factors contributing to the increment in per capita income from all sources. Peasants' incomes are notoriously difficult to define and measure. The numerous elements of these incomes, and the variety of policy instruments used by the planners for their control, are described in the last section, which also traces the principal sources of the growth of peasant incomes in the area during the period under study.

Finally, it should be observed that, given the preponderantly descriptive and statistical-analytical character of the treatment, the validity of the conclusions drawn is necessarily a function of the scope and the reliability of the statistics on which they rest. It is well known that, in all the countries treated, there has been a continuous improvement in the coverage and quality of statistics in general, including those relating to national accounts and incomes. But this very improvement has meant that, on the one hand, some data are available only for the later years of the period under study (which accounts for numerous gaps in the tables) and, on the other, frequent changes in statistical definitions and coverage have reduced the comparability of statistics over time. Moreover, the sharp price fluctuations that took place almost everywhere in the early postwar investment phase, as well as the familiar weaknesses of the theory of index numbers, render interpretation of trends at constant prices more difficult. Some problems of measurement and reliability are discussed in a short note on the methodology of construction of the main indices of average incomes used, which is appended to the chapter.

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7.1. The Implications of General Economic Policies for the Postwar Growth of Population Income and Consumption

The period of reconstruction

The four or five years following the end of the last war and preceding the period under study are usually regarded as a transitional phase of reconstruction in the postwar economic development of eastern Europe and the Soviet Union. In the eastern European countries the political and social revolutions that took place during these years meant that it was also a period of far-reaching transformations of property relationships and of economic organization. The process of the socialization of the means of production continued, particularly in agriculture, into the late 1950s. But at the turn of the 1950s two conditions allowing the beginning of a new phase were already present: the productive capacities of all the countries of the region (including the Soviet Union) had reached, or even exceeded, their pre-war levels;[1] and governments had concentrated instruments of economic control powerful enough to enable them to launch comprehensive long-term development programmes aimed at radically transforming the structure of their economies.

At the end of the war, living standards had fallen to very low levels everywhere, although the extent of the decline must have varied markedly between countries, depending largely on the extent of their involvement in the war. These differences were modified somewhat in the immediate postwar years when some countries (Poland, Czechoslovakia, Albania) benefited from considerable help from outside (UNRRA), whereas others (eastern Germany, Hungary, Rumania) had to pay reparations which reduced their disposable national income. The paucity of statistical data makes it impossible to form a clear picture of changes in living standards during the reconstruction period. There is no doubt, however, that — partly because the starting point was so low — real incomes were increasing quite rapidly everywhere and by the late 1940s had in most cases reattained or come very near to the average pre-war levels.

The participation of the various socio-economic groups in this general advance was, however, very uneven, and this invariably led to a narrowing of the income differentials prevailing before the war. Developments during the war, as well as government policies immediately afterwards, both contributed to this trend. Subsistence farming, characteristic of wide areas of this part of Europe, and an improvement in the "terms of trade", prevented a fall in the living standards of peasants of the magnitude experienced by the urban population during and after the war. The postwar land reforms, which redistributed large land holdings among the poorer sections of the peasants in most countries of the area, contributed further to an improvement in the relative position of the bulk of the peasantry *vis-à-vis* the urban population, as well as to a marked narrowing of the
spread of incomes on the land. At the same time, t
nationalization of industrial and commercial propert
which was carried out with little or no compensatio
and the curtailment of incomes from house-rent, gradual
eliminated profits from capital and property. The stea
growth of restrictions on the activities of artisans a
retail traders tended to reduce the status and the incor
of these "self-employed" categories, which had former
belonged to the higher income bracket. At the other e
of the income scale, the success of the reconstructi
plans in providing new employment outlets led to
reduction — or in some countries the disappearance —
the urban unemployment which had prevailed in mo
countries of the area before the war; and a certain leve
ling of the relative incomes of manual and non-manu
workers (or workers and employees) that occurred duri
the war generally tended to become a permanent featu
of income distribution — greatly aided in most countri
by the maintenance of food rationing until the ear
1950s.

In contrast to eastern Europe, where the postw
social transformations had an evident impact on incon
formation and distribution, the policies and develo
ments during this period in the Soviet Union we
entirely subordinated to the exigencies of postwar r
adjustment and reconstruction, leaving little scope for a
refinement of the income policies pursued previousl
The priority expansion of heavy and basic industri
and of the construction sector was re-emphasized, parti
ularly in the early postwar years. However, the rap
rates of recovery attained also made possible a mark
rise in consumption levels from their 1945 nadir. F
1948, national income was reported to have exceeded t
1940 level, and in 1950 — the last year of the Four
Five-year Plan — the share of consumption amount
to 74 per cent of national income (at current prices
thus corresponding exactly to the income distribution
1940. It seems, however, that at comparable pric
the share of consumption was lower in 1950 than
1940 by a not insignificant margin.[3]

To sum up, the major economic task of the ear
postwar period — reconstruction from the ravages
war — coincided with social revolutions which broug
in their wake some very radical and permanent changes
the property relations and income relatives of vario
socio-economic groups, tending on the whole towards
narrowing of the previous differentials.

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[1] Broadly speaking, by 1949-1950 industrial production was already above the pre-war volume everywhere, but agricultural output was still below the pre-war levels. See *Economic Survey of Europe since the War*, ECE, 1953, Part II, Chapters 3 and 4.

[2] The collectivized Soviet peasant gained probably relatively l
during the war from the improvement in his "terms of trad
than did his eastern European counterpart. In any case, the pre-w
relatives were restored soon after the end of the war. The index
prices on collective-farm markets, which stood at 372 in 19
(1940 = 100), had fallen to 103 by 1949; and the 1947 curren
reforms effectively wiped out most of the savings accumulat
by the Soviet peasantry during the preceding years.

[3] A derived index of investment goods' prices stood at 127 in 19
(cf. *Economic Survey of Europe in 1951*, p. 144) compared w
one of 186 for consumer goods sold in the state retail trade (1940
100).

TABLE 7.1

Changes in some basic indicators of output and distribution, 1950-1965

A. *Index numbers, 1950=100*

Country	National income produced	Global output of :				Employment outside private and co-operative agriculture	Consumption			Investment outlays		
		Industry			Agriculture [a]		Total	Individual	Services to population	Total	Productive	Non-productive
		Total	Producers' goods	Consumers' goods								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Bulgaria	279 [b]	691	1 004	505	169	273	269 [b]	..	..	657	..	..
Czechoslovakia	229	364	436	289	119	149	207	194	268 [c]	332	350	284
Eastern Germany	354 *[d]	389	..	..	..	125	321*	..	..	550 [ef]	..	..
Hungary	234	391	..	..	137	169	237	227	349	282 [f]	..	..
Poland	275	508	613	401	144	177	258	251	376 [c]	363	378	321
Rumania	411	653	825	460	159	205	..	..	..	783 [f]	779 [f]	820 [f]
Soviet Union	361	457	514	360	173	198	..	..	..	445	442	458

B. *Annual cumulative rates of growth*

Country	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Bulgaria	8.2 [b]	13.8	16.6	11.4	3.6	6.9	7.9 [b]	..	..	13.3	..	..
Czechoslovakia	5.7	9.0	10.3	7.4	1.2	2.7	4.9	4.5	6.8 [c]	8.3	8.7	7.3
Eastern Germany	8.8	9.5	..	..	..	1.4	8.1*	..	..	12.0 [ef]	..	..
Hungary	5.8	9.5	..	..	2.2	3.6	5.9	5.6	8.7	7.1	..	..
Poland	7.1	11.4	12.8	9.7	2.4	3.9	6.5	6.3	9.2 [c]	8.9	9.3	8.1
Rumania	9.9	13.3	15.2	10.7	3.2	4.9	..	..	..	14.8 [f]	14.8 [f]	15.0 [f]
Soviet Union	8.9	10.7	11.5	8.9	3.7	4.7	..	..	..	10.5	10.5	10.7

Sources: See Table 7.13 and Appendix Tables 7.I, 7.III and 7.IV.

[a] 1963-1965 average compared with 1950-1952 average.

[b] 1952-1965 period (1952=100).

[c] Collective consumption (material cost of services to population and of government institutions).

[d] Distributed national income.

[e] At current prices.

[f] State and co-operative sector.

The growth and the use of output in the 1950-1965 period

A high rate of expansion characterized the economic development of the area over the fifteen years under study. Net material income increased about 2½ times in Czechoslovakia and Hungary, nearly 3 times in Poland, more than 3½ times in Bulgaria, eastern Germany and the Soviet Union, and more than 4 times in Rumania. In terms of cumulative annual rates of growth, these multiples represented a range from about 6 per cent in Czechoslovakia and Hungary to about 10 per cent in Rumania (see Table 7.1).[4]

The high rates of overall expansion were invariably achieved through the rapid development of industry and the supporting sectors — construction and, to a lesser extent, transport. Accelerated industrialization has been the basic tenet of development strategy of all centrally planned economies from the start of the plan era. For Bulgaria, Rumania and, to a lesser extent, Hungary, Poland and the Soviet Union the objective was to provide means for closing, in a relatively short time, the gap in the levels of per capita output separating them from the economically more advanced market economies. In the two more advanced and more trade-dependent countries — Czechoslovakia and eastern Germany — the emphasis on the maximization of the rate of growth was always less, and the pattern of growth was relatively less concentrated on the development of basic and heavy industries.

These tendencies, as they operated throughout the 15-year period, are illustrated in Table 7.1. Global industrial output rose over the period by nearly four times in Czechoslovakia, eastern Germany and Hungary, by 4.5-5 times in the Soviet Union and in Poland, and by 6.5-7 times in Rumania and Bulgaria. Admittedly, for a variety of reasons,[5] trends in net value added show a significantly smaller margin of growth in all the countrie for which data are available, except Rumania,[6] but eve so the lowest registered average annual rate (i Czechoslovakia) amounted to about 8 per cent a yea whereas — at the other end of the range — th annual rate observed in Rumania amounted to nearl 15 per cent.

Throughout the period an important feature of indus trial development very relevant to income policy was th markedly faster growth of branches producing producers goods (Group A) than those whose product is destine for immediate consumption (Group B).[7] As alread mentioned, the gap between these trends has been ver much a function of the level of development reache Thus, in Bulgaria and Rumania output of Group A wa about twice that of Group B, whereas in other countrie the margin of difference centred around 50 per cen This characteristic pattern of attaching priority to th production of producers' goods has not been restricte to the distinction between Groups A and B. The law o "planned and proportionate" development also require that within the output of producers' goods (or "means o production"), the output of the means of production o producers' goods should grow faster than that of th means of production of consumers' goods. Indeed, in th Soviet Union, the output of the former rose 5.6 time between 1950 and 1964, compared with 3.1 times for th latter. Somewhat different, though relevant, is the sub division of Group A into "the instruments of labour and "the objects of labour".

The table below shows that both in Bulgari and the Soviet Union the output of " instruments o labour " grow nearly 2½ times faster than that o intermediate products:[8]

	Bulgaria				Soviet Union		
	1950	*1964*	*1964 (1950 = 100)*		*1950*	*1964*	*1964 (1950 = 100)*
	Percentages				*Percentages*		
Total global output of industry	*100.0*	*100.0*	6 times		*100.0*	*100.0*	*421*
Producers' goods (Group A)	38.2	51.4	8½	times	68.8	74.8	475
Instruments of labour	6.0	11.9	17	"	17.9	32.9	818
Objects of labour	32.2	39.5	7	"	50.9	41.9	370
Consumers' goods (Group B)	61.8	48.6	4½	"	31.2	25.2	332

Sources: Statistical yearbooks.

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[4] It is uncertain to what extent these growth rates, which relate to a restricted (material) concept of national income, can be compared with those obtained in the western national accounts by measuring a wider aggregate which includes the wage element of the non-productive sectors. An attempt at comparative analysis of the 1950-1959 period in another ECE study (*Some factors in economic growth in Europe during the 1950s* (*Economic Survey of Europe in 1961*, Part 2), Chapter II, section 1) showed no very significant differences in the rates of growth of the two aggregates for individual countries. To judge by the relative trends of employment in the productive and non-productive sectors, the material product aggregate seems to have grown faster than the GNP in the early 1950s, whereas the contrary was probably true in the later years. It is in any case clear that more refined adjustments for coverage would not call in question the generally high rates of economic growth achieved by the planned economies of eastern Europe during the 1950-1965 period taken as a whole.

[5] For differences in national accounting methodology and their impact on growth rates see also "A note on some aspects of national accounting methodology in eastern Europe and the Soviet Union", *Economic Bulletin for Europe*, Vol. 11, No. 3.

[6]

	Global industrial output 1963	*Net value added*
	(1950 = 100)	
Czechoslovakia	324	265
Hungary	343	310
Poland	426	333
Rumania	502	540

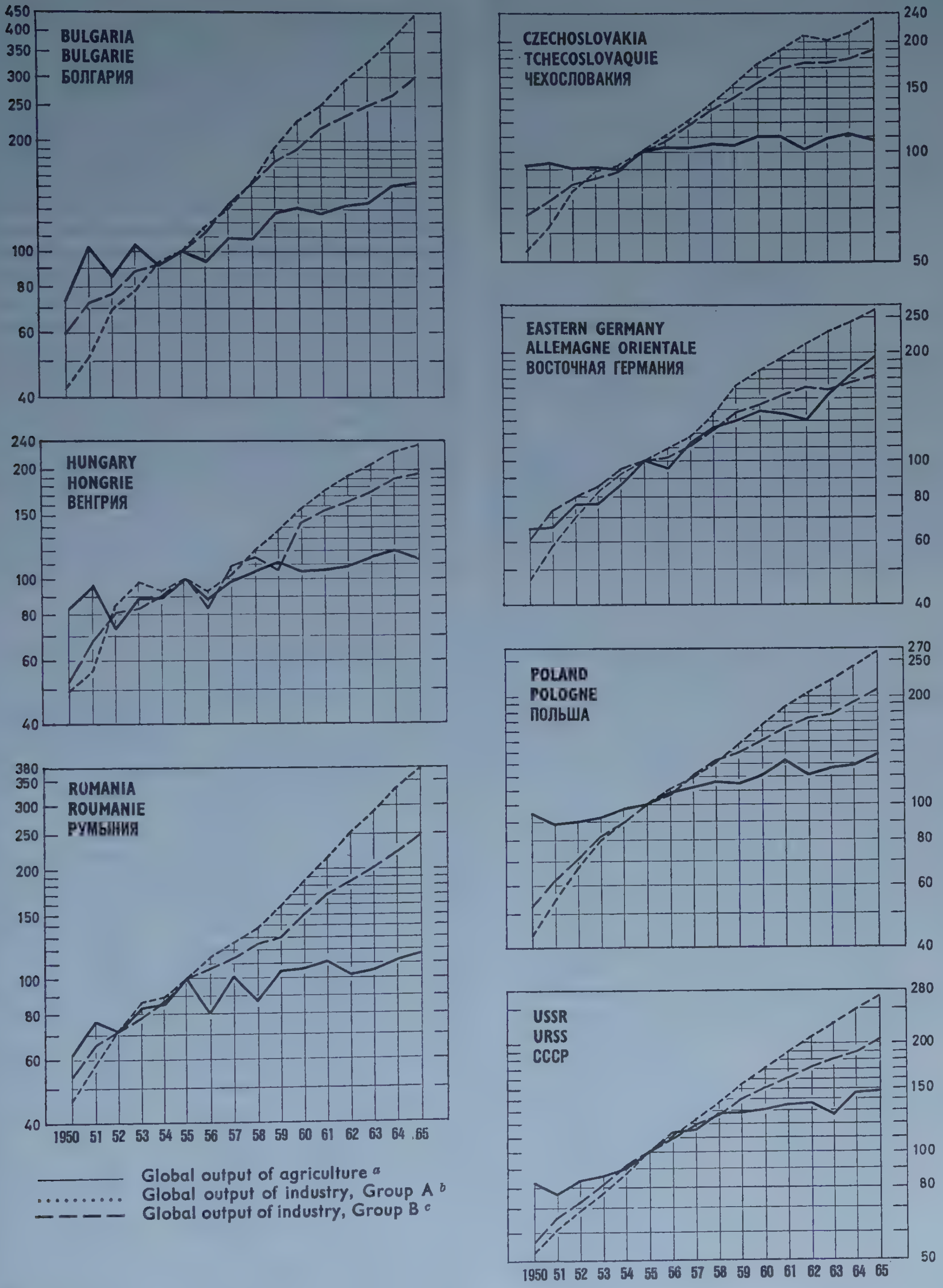
[7] The allocation is usually made on the basis of the predominan destination of output of the enterprise, and the distinction betwee the two groups is further blurred by the fact that Group A als includes the proportion of goods in consumers' demand which i subject to further processing (such as flour, sugar or textiles) The statistical problem of separating the latter category of good must be enormous, but the breakdown plays an important role i the marxist theory of reproduction.

[8] According to a Bulgarian definition, the former include the whol output of engineering outside the production of consumers' durable and medical instruments, and that of other instruments and tools whereas the latter covers the intermediate products, and fuel an energy consumed for all productive purposes.

CHART 7.1

Trends in global output of agriculture and industry

Index numbers, 1955 = 100



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[a] For eastern Germany: current prices.

[b] For eastern Germany: metal-processing industry; for Hungary: heavy industry.

[c] For eastern Germany and Hungary: light industry.

The high rates of expansion of industrial output were in contrast with the relatively slow progress made in the agricultural sector. Comparing the arithmetic averages of the last with the first three years of the period under discussion, the figures in Table 7.1 show increases in global output of agriculture ranging from some 20 per cent in Czechoslovakia to about 70 per cent in Bulgaria and the Soviet Union.[9] Thus, the share of industrial output in total product rose and that of agricultu
fell markedly everywhere; and this disproportion was
the whole more pronounced in less developed countri
allowing them to narrow the gap separating them fro
their more advanced neighbours (see Chart 7.1).

This programme of accelerated industrialization dr
its strength from the policies pursued in allocating ma
power and material resources. The policy of maximu
utilization of existing labour reserves and their channe
ling into the priority sectors of the economy play
a crucial role in the implementation of the developme
programmes everywhere.[10] The liquidation of urb
unemployment, and of the rural under-employme
characteristic of most countries of the area in the ear
phases of their postwar development, was accompani
by the absorption of a large proportion of family depe
dants, primarily housewives, into the labour forc
In most countries, particularly in those with large rese
voirs of redundant labour in rural areas, massive transfe
from villages to towns took place, speeding up t
process of urbanization and transforming the emplo
ment structure of the population. Thus, in the two lea
industrialized countries — Bulgaria and Rumania — t
share of rural population declined from about thre
fourths in the late 1940s to below two-thirds in the mi
1960s; and in Poland and in the Soviet Union these shar

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[9] For year-to-year changes, the global output of agriculture may differ widely from value added, since changes in climatic conditions affect greatly the material cost per unit of output. Over longer periods of time, however, the differences found seem to have been on a somewhat smaller scale than those affecting industrial output aggregates, as the following figures show:

Output of agriculture, 1963-1965

1950-1952 average = 100

	Global output	*Value added*
Rumania	159	142
Czechoslovakia	119	77
Poland	144	130
Hungary	137	110
Soviet Union (1952 to 1962) . . .	164	151

The value added index in Czechoslovakia was obtained by correcting the 1963-1965 average value for the upward adjustment in the level of agricultural prices introduced in 1960. As the reform affected prices of grains more than livestock products, but output of the former declined between 1960 and 1965 whereas that of the latter increased, the correction may have resulted in some understatement of the value added in 1963-1965.

[10] See *Some factors in economic growth in Europe during the 195*
op. cit., Chapter IV, Tables 3 and 4.

TABLE 7.2

The structure of investment, 1950 to 1965

Percentages

Country and period		Total investment			Industrial investment		
		Total	Productive	Non-productive	Total	Producer-goods branches	Consumer-goo branches
Bulgaria [a]	1950	100.0	78.4	21.6	100.0	87.0	13.0
	1960	100.0	84.3	15.7	100.0	79.5	20.5
	1964	100.0	86.2	13.8	100.0	84.7	15.3
Czechoslovakia	1950	100.0	73.0	27.0	100.0	. .	. .
	1960	100.0	74.8	25.2	100.0	90.2	9.8 [b]
	1964	100.0	76.6	23.4	100.0	87.7	12.3 [b]
Hungary	1950	100.0	74.0	26.0	100.0	90.7	9.3 [b]
	1960	100.0	78.5	21.5	100.0	83.7	16.3 [b]
	1965	100.0	77.8	22.2	100.0	78.6	21.4 [b]
Poland	1950	100.0	73.8	26.2	. .	. .	. .
	1960	100.0	70.0	30.0	100.0	82.9	17.1 [b]
	1965	100.0	76.8	23.2	100.0	87.6	12.4 [b]
	1950-1965	100.0	73.2	26.8	100.0	. .	. .
Rumania [a]	1950	100.0	86.8	13.2	100.0	86.2	13.8
	1960	100.0	83.5	16.5	100.0	83.1	16.9
	1965	100.0	86.2	13.8	100.0	90.6	9.4
	1950-1965	100.0	85.2	14.8	100.0	88.2	11.8
Soviet Union	1950	100.0	68.0	32.0	100.0	87.8	12.2
	1960	100.0	61.3	38.7	100.0	84.7	15.3
	1964	100.0	67.4	32.6	100.0	87.6	12.4

Sources: National statistics.

[a] Excluding self-financed private investment.

[b] Lightand food-processing industries.

ceeded 60 per cent in 1950 and had fallen below 50 per nt by 1965 (see Table 7.2 and Appendix Table 7.III). hanges in the structure of employment were more reeping still, partly because the rural emigrants consisted rerwhelmingly of already employed or employable ung people (thus reducing the rural participation rate), d partly because the incidence of non-agricultural nployment tended to rise in the villages. Moreover, the creased employment opportunities in villages gave rise the establishment of a numerically strong socio- onomic group of peasant-workers — a phenomenon great relevance to the formation and distribution of e total population income.

In the earlier phases, the mobilization of labour sources was facilitated by the existence of unused pro- ctive capacities. But stress was soon laid on the instal- ent of new capacities, particularly in the basic material dustries, in metallurgy, energy and machine-building, d the share of total output devoted to further repro- ction processes became considerable.[11]

Not only was the investment effort immense throughout e period under study, but it was also concentrated on e expansion of those sectors and branches most likely secure a high rate of economic growth. As the data Table 7.2 show, fixed investment in "productive" ctors generally absorbed between two-thirds and ree-fourths of total outlays.[12] Perhaps more impor- nt still — for its influence on both the effectiveness of pital formation as a growth-promoting factor and on come policy issues — was the pattern of investment by dustrial branches. As the data in the last columns of ble 7.2 show, as much as 80-90 per cent of total indus- al investment in Bulgaria, Rumania and the Soviet nion was spent on projects stimulating output of capital ods and intermediate goods.[13]

Over the 15-year period the emphasis on investment eant that total (material) consumption increased some- hat less rapidly than total (material) output.[14] Even so, the level of consumption was, in 1965, about twice as high as in 1950 in Czechoslovakia and about 2½ times higher in Hungary and in Poland. In Bulgaria, eastern Germany, Rumania and the Soviet Union, for which no data covering the whole period are available, the increase was probably nearer threefold. Taking into account the growth of population, these multiples represented a range of cumulative annual rates from about 4 per cent in Czechoslovakia to 7½ per cent in eastern Germany. The volume of benefits in kind, accruing to the population through budgetary expenditure in such fields as health and education, seems to have grown faster — at least in its material content — than individual consumption, but information relating to this consumption category is scanty.

This very general and summary account of the progress made by the centrally planned economies in raising the level of output over the whole 15-year (1950-1965) period, and of the principal elements of the development policies adopted by these countries, does not bring out the important changes that occurred *during* the period in individual countries with regard to the rate of growth and to the pattern and the use of output. In the following section an attempt is made to identify the main phases of development in individual countries and to indicate to what extent the pattern of this development has varied between them. Notwithstanding country-by-country differences, it is possible to discern some common features, in respect of changes in the strategy of growth over time and of their consequences.

Thus, all economies of the area, except perhaps the Soviet Union where the corresponding development took place already in the late 1920s and in the 1930s, experienced for several years following the postwar reconstruction period a stage of rapid "take-off", associated largely with the availability of untapped labour reserves (both in the towns and in the countryside) and of unused capacities in some industries and, in some countries, relatively easy exploitation of natural resources. This stage, covering broadly the years 1948-1949 to 1953-1955, was characterized by very fast growth of total product, at a rate everywhere exceeding 10 per cent per annum. This was an "easy" development phase, when marginal capital/output ratios were universally declining in spite of the initiation everywhere of large investment projects with long-term maturities; and the "cake" was growing fast enough to permit — in some countries at least — appreciable improvements in consumption levels, in spite of the emphasis on maximization of investment and growth.

The following decade (roughly the 1955-1965 period) does not, however, lend itself to easy generalizations. Rates of growth of national income slowed down significantly everywhere, but the timing and the extent of this deceleration, as well as its impact on resources allocation, varied considerably between countries, as shown in section 7.2 below. The relative weight of the factors responsible for this slowing down also varied from country to country. Generally, returns to new capital tended to fall, accompanied — and partly caused — by a slowing down in the rate of expansion of employment. The scope

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[11] Outside eastern Germany and Czechoslovakia, the pragmatic e accepted in the early phases of planning in the Soviet Union the effect that "about a quarter" of (material) national income ould ideally be allocated to accumulation was also aimed at in stern Europe, particularly in the earlier stages of their postwar velopment. The differences in the coverage of the relevant aggre- tes and valuation problems make international comparisons on share of national income devoted to investment hazardous. The gh estimates made in the ECE study already cited put the gross d investment ratios (in relation to gross domestic product) over fifth decade as a whole at about 20 per cent in Bulgaria, Hungary Poland; and for the Soviet Union the ratio was estimated to ount to nearly 28 per cent in 1959.

[2] The data for Bulgaria and Rumania omit some types of private estment and therefore underrate somewhat the weight of non- ductive investment.

[3] For other countries (Czechoslovakia, Hungary and Poland) figures on investment in consumers' goods are restricted to lays in the light and food-processing industries, and leave out estment connected with the output of other consumers' goods, h as consumers' durables.

[4] In all countries for which trends can be ascertained, productive estment rose by more than non-productive investment, but the ference was not very marked. The Rumanian data exclude vate expenditure on housing construction and this has imparted upward bias to the observed trend in non-productive investment.

TABLE 7.3

Population and employment structure in selected years

Percentages

Country and year		Rural population	Urban population	Employment in agriculture[a]	Employment outside agriculture
		(As percentage of total population)		*(As percentage of total working population)*	
Bulgaria	1948 . .	73.8	26.2	82.1	17.9
	1952 . .	71.2	28.8	73.7	26.3
	1956 . .	67.0	33.0	70.5	29.5
	1964 . .	57.0	43.0	47.3	52.7
Czechoslovakia	1950 . .	48.8	51.2	38.6	61.4
	1955 . .	. .	. .	34.0	66.0
	1961 . .	47.6	52.4	24.0	76.0
	1965 . .	. .	. .	19.5	80.5
Eastern Germany	1952 . .	28.7	71.3	22.8	77.2
	1955 . .	28.4	71.6	22.4	77.6
	1960 . .	28.0	72.0	17.5[b]	82.5
	1964 . .	27.1	72.9	16.5[c]	83.5
Hungary	1949 . .	63.4	36.4	55.5	44.5
	1954 . .	60.9	39.1	45.3	54.7
	1960 . .	60.2	39.8	39.6	60.4
	1963 . .	58.3	41.7	34.2	65.8
	1964 . .			32.4	67.6
Poland	1950 . .	63.8	36.2	57.2	42.8
	1955 . .	58.1	41.9	53.4	46.6
	1960 . .	52.7	47.3	47.7	52.3
	1965 . .	50.6	49.4	44.0	56.0
Rumania	1948 . .	76.6	23.4	74.3[d]	25.8[d]
	1956 . .	68.7	31.3	69.4	30.6
	1965 . .	66.3	33.7	56.7	43.3
Soviet Union	1950 . .	61.1	38.9	48.0	52.0
	1955 . .	55.6	44.4	44.7[e]	55.3[e]
	1959 . .	52.1	47.9	39.2	60.8
	1965 . .	46.9	53.1	33.0[e]	67.0[e]

Sources: National statistics; *Some factors in economic growth in Europe during the 1950s* (*Economic Survey of Europe in 1961*, Part 2); ZSSR, *Wazniejsze Dane Statystyczne*, Warsaw 1966; *Nowe Drogi*, No. 11, 1966, p. 28.

NOTE. — Unless otherwise stated, population data refer to the beginning of the year but those on employment to annual averages. Eastern German data on population breakdown refer to localities with less and with more than 2,000 inhabitants.

[a] Including forestry.

[b] 17.7 per cent according to the new definition of total employment.

[c] Including only the actually participating members of collective farms.

[d] In 1950.

[e] 1964.

for further increases in activity rates was narrowed, and in some countries the supply of manpower was adversely affected by demographic factors, such as reduced entry into the labour force from the diminished war birth-cohorts and the ageing of the population; the attempts to offset these developments by relying more on labour productivity improvements were not a complete success. Progress in agriculture was unsatisfactory, in spite of the policy of improving incentives to farmers and of raising investment. The growing complexities of the economies at the higher level of development gave rise to problems of adaptation of supply and demand, and a search began for more flexible forms of planning. By the early 1960s, the spearhead of development strategy had visibly shifted everywhere from maximization of growth rates to promotion of rationality and quality.

In the mid-1950s Poland, Hungary and Czechoslovakia went through a distinct — though rather short-lived — “consumption phase”, and in other countries the inves ment ratio showed a declining tendency. However, th allocation policy was soon reversed, and by the ear 1960s all countries were again on the path of investme expansion.[15] Several factors explain this policy. Firs in the conditions of an increasing capital/output rati expansion in the volume of capital seemed indispensab if reasonably high rates of overall growth were to maintained. Second, in some countries (Poland, Sovi Union), the arrival on the labour market of the nume cally strong postwar birth-cohorts called for creation new employment outlets. Third, further increases consumption levels and in living standards in gene could not have been envisaged without increased inves ment efforts in agriculture, housing and retail tra astly, in some countries, notably in the Soviet Union, e international tensions were officially given as a reason r below-plan expansion of consumption in the late 50s and early 1960s.[16]

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[15] See “A fifteen-year review of investment and output in Easte Europe and the Soviet Union” in the *Bulletin*, Vol. 18, No.

he impact of the growth strategy on incomes policies

The adoption of the objectives of economic developent described above, and the choice of the means for eir implementation, could not fail to influence greatly comes policies in the area. Indeed, some aspects of the neral strategy of growth — such as a high investment tio — can be said to constitute an integral part of an comes policy, at least in the widest sense of the term; d it will be shown that several other features of the osen strategy had significant implications for incomes olicy, at both the planning and at the implementation vels.

The first link between allocation policy and incomes olicy consists in the fact that investment effort, within mits of degree and time, can be intensified at the expense consumption, or the growth of the latter may be owed down to allow for a more rapid increase of the rmer. Of course, the relationship looks different from a ng-term perspective, when the benefits of past sacrifices e reaped. Since no welfare maximization technique has yet been devised to establish the optimum investment tio which could disregard the time factor,[17] the costs d benefits of the deliberate decision of policy makers the centrally planned economies, particularly in the rly phases of the take-off, to forgo to some extent rrent consumption for the sake of future growth of tput and living standards [18] cannot be statistically aluated.

Perhaps more important than these essentially hypothecal considerations is the fact that the growth maximizaon policies underlying the long-term plan targets were nerally accorded even more emphasis in the implemention stage than anticipated by the planners. Particularly the earlier periods, the almost absolute priority attached y the central authorities to the fulfilment of plans in the owth-promoting sectors resulted in under-fulfilment of rgets in the consumption-inducing fields such as the ght industries (with regard to both output and investent), housing, and — above all — agriculture (see hart 7.2 and Table 7.4). At the same time, employment lans tended to be exceeded by large margins. This eant that the planned volume of consumers' supplies as not forthcoming at a time when pressures of demand were rising above expectations, giving rise to serious balancing problems and frequently leading to downward adjustments of income and consumption targets.

By far the most important element providing a link between development strategy and incomes policy was the reliance of the former on the expansion of the labour force and on the structure of employment as the crucial factors of growth.[19] It is no exaggeration to say that in all centrally planned economies during the whole of the period under review, although to a varying degree, incomes policy was to a large extent shaped by employment policy; it could not be, and was not, considered in isolation. This manifested itself in two principal ways. First, the greatly increased employment opportunities in the towns led — by overcoming unemployment in the early phases, and by absorbing dependent family members into the labour force on a large scale later — to an increase in the number of wage-earners in the family and, by the same token, to an increase in total family wage incomes. The excess of demand over supply for some skills also resulted in some countries in cumulation of jobs by one person; and in the countryside the opportunities frequently offered to peasants for obtaining additional incomes from part-time employment (such as cartage, or assistance in construction projects started in new industrial settlements) led, as already mentioned, to the establishment of a peasant-worker category.

Second, and partly associated with this widening of employment opportunities, was the scope and the encouragement given to "vertical" mobility of labour, usually from the less productive (and worse-paid) to the more productive (and better paid) jobs and skills. New construction projects provided demand for unskilled labour recruited largely in the countryside, where — in most countries — the marginal productivity of labour was very low. At the same time, vast programmes of general education and specialized training were instituted everywhere, providing the means for rapid advancement on the ladder of skills — and corresponding tariff grades.

Thus, the increase in the number of wage-earners in the family, the accumulation of additional sources of incomes, and changes in the structure of skills and of employment, played a major part in raising the total and the per capita incomes of the population. Indeed, their effect was such that the scope for upward revisions of basic wage and salary rates was greatly narrowed, particularly in view of the continuous pressures on the consumer markets for reasons mentioned above.

It has to be borne in mind that the intensity of the forces and of the inter-relationships described in the preceding paragraphs has varied over time. It is evident that once the easily exploitable labour reserves had been utilized and the scope for structural change reduced, planners attached more importance to improvements in labour productivity in each sector and branch as a vehicle for output expansion. It does not seem,

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[16] Cf. *Narodnoe khozyaistvo SSSR v 1962*, p. 483.

[17] For discussion of this subject see, for instance, A. Notkin in *oprosy ekonomiki*, No. 8, 1964, and O. Lange, *Nowe Drogi*, o. 2, 1965.

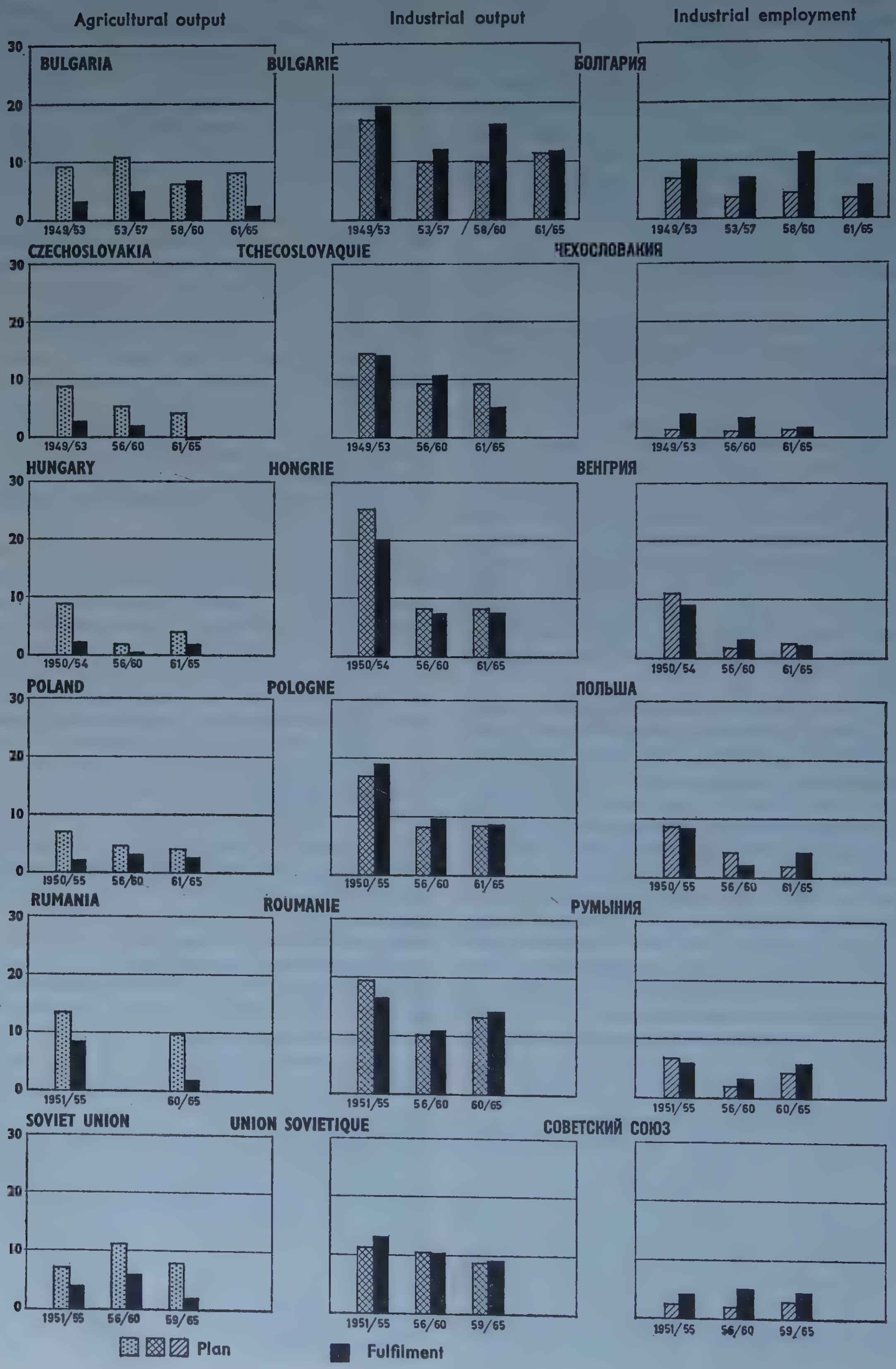
[18] The available information does not show any *declines* in total onsumption levels during the investment phases. However, in the fficult 1950-1953 years per capita individual consumption dropped Czechoslovakia by a few percentage points and it remained ationary in Hungary. On the other hand, some specific measures d tend to reduce consumption standards. In Poland, for instance, e pattern of trade changed in the 1949-1953 period, cutting down e import of materials for light industry and doubling the net ports of foodstuffs. See J. Pajestka in *Social and Political Transrmation in Poland* (ed. S. Ehrlich), Warsaw 1964, p. 54.

[19] For the contribution of changes in the structure of employment to the growth of labour productivity and total output, see *Some factors in economic growth in Europe during the 1950s, op. cit.*, Chapter III, section 9.

CHART 7.2

Long-term plan targets and their fulfilment

Average annual rates of growth



Long-term plan targets and results in agriculture, industry and employment, 1949 to 1965

Annual cumulative rates of growth

Country and plan period	Global output of agriculture		Global output of total industry		Producers' goods (Group A)		Consumers' goods (Group B)		Industrial employment		Employment outside co-operative and private agriculture	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Bulgaria												
1949-1953	9.4	3.2	17.0	19.5	26.6	23.0	11.8	17.2	6.7	10.0	8.6	11.5
1953-1957	10.8	4.9	9.9	12.7	12.5	13.6	8.0	12.1	3.5	6.9	5.9	5.7
1958-1960 [a]	6.2	6.6	9.9	16.2	12.1	20.5	8.5	12.5	4.4	11.0	..	9.8
1961-1965	8.1	3.2	11.2	11.7	..	14.1	..	9.4	3.4	5.6	..	4.3
Czechoslovakia												
1949-1953	8.9 (6.5)	2.7	14.6 (9.4)	14.1	18.2 (11.2)	17.1	11.6 (8.5)	10.7	1.4	4.1	4.6 (2.7)	5.9
1956-1960	5.4	1.9	9.3 (8.5)	10.7	9.9 (9.4)	11.7	7.3 (7.0)	9.3	1.2	3.4	1.6	2.5
1961-1965	4.1	— 0.2	9.3	5.2	11.2	5.8	6.0	4.2	1.4	1.9	1.7	2.6
Eastern Germany												
1951-1955	9.4	..	13.7	13.7	..	14.2	..	13.0	3.5	5.2	2.5	4.1
1956-1960	4.1	..	6.7 (9.2)	9.2	7.0 (9.9)	..	5.9 (7.0)	..	0.6	..	..	..
1959-1965	..	..	9.4	4.8	10.0	..	8.5	..	0.6	..	— 1.2*	..
Hungary												
1950-1954	9.0 (7.3)	2.3	25.4 (13.2)	20.1	30.6 (15.4)	23.3	19.6 (11.6)	17.8	11.2 [b] (8.5)	9.2 [b]	..	..
1956-1960	1.9 [c]	0.4 [c]	8.3	7.4	9.7	..	6.8	..	1.7	3.2	..	ca 3.0
1961-1965	4.1 [d]	1.9 [d]	8.3	7.7	8.7	..	7.4	..	2.5	2.3	4.2	3.0
Poland												
1950-1955	7.0	2.1	17.0	19.0	17.0 [e]	19.9	13.3 [e]	18.0	8.7	8.3	8.0	8.3
1956-1960	4.6	3.7	8.3 (8.9)	8.7	8.6 (8.9)	10.3	8.0 (9.0)	9.0	4.2	2.1	3.7	1.7
1961-1965	4.1	2.7	8.5	8.6	8.6	9.7	8.3	6.7	1.7	4.1	2.3	3.2
Rumania												
1951-1955	13.5	8.5	19.5	16.5	..	18.2	..	14.7	6.8	5.9	6.7	6.8
1956-1960	..	..	10.1	10.9	11.6	13.1	8.8	8.3	1.9	3.2	..	1.9
1960-1965	9.8	2.0	13.2	14.1	14.0	15.7	12.3	11.5	4.3	5.8	4.9	6.1
Soviet Union												
1951-1955	7.3	4.1	11.2	13.1	12.5	13.8	10.5	12.0	2.5	4.2	2.8	4.6
1956-1960	11.2	6.0	10.5	10.4	11.2	11.3	9.9	8.5	1.9	5.1	..	5.1
1959-1965	7.9	2.0	8.8	9.1	9.3	10.1	7.3	6.9	2.9	4.5	2.9	4.6

Sources: Plans, plan-fulfilment reports, national statistics.

NOTE. — Figures in brackets refer to the original versions of the plans. Some rates shown in the table refer to mid-points of ranges given by the plans. The table also incorporates targets of plans which were eventually abandoned.

[a] Plan targets for 1958-1962, actual 1958-1960.

[b] Including building industry.

[c] 1956-1960 average over 1951-1955 average.

[d] 1961-1965 average over 1956-1960 average.

[e] Large and medium size enterprises only, the total global output of which was to increase by 136 per cent over the plan period.

however, that improvements in labour productivity played a predominant part in the growth of wage-earners' total income during the "consumption" phase. The decline in the relative importance of the growth of employment was due partly to demographic causes (a drop in the number of potential new recruits to the labour force) and partly to the upward revision of the wage-tariff, particularly pronounced in Poland and Hungary. Owing to demographic changes and, in some countries, further increases in urban activity rates, the contribution of employment to the total wage income rose again in the 1960s.

The impact of employment policy on the formation of family income,[20] and on the structure of skills, also extended to the differentiation of incomes and living standards among families and various socio-economic groups. In the towns, improvements in family living standards came to depend — to a very large extent, in the earlier phases — on the composition of the family; for, other things being equal, families with small children (and no grandmother to look after them) were clearly handicapped compared with those where opportunities for additional employment existed and were taken.[21] As a result, some families gained more than others and — in the conditions of rising prices typical of the earlier period — some even lost. This had the effect of distorting the desired pattern of income differentials, in addition to creating hardship for families with a large number of children.[22] In the villages, too, peasants who — thanks to the proximity of a town or industrial settlement — could offer part-time services participated disproportionately in the improvement in living standards.

The movement of labour from agriculture to other occupations, and the changes in the skill structure outside agriculture, also affected income differentials.[23] These effects, however, were largely anticipated and controlled, whereas the incidence of additional employment in urban or rural families was haphazard and uncontrollable in its differentiation effect.

Changes in allocation policy over the years had, or could be expected to have had, further effects on such aspects of incomes policy as consumers' price policy and wage policy, which are more loosely intertwined with employment strategy. In the early investment period, imbalances in consumers' markets brought pressure to bear on consumers' prices which could not be withstood despite the maintenance of general rationing; and average prices — particularly those of food — were allowed to rise almost everywhere (see Table 7.15). The monetary reforms introduced around 1953 went some way towards restoring balance between supply and purchasing power; this in turn permitted a revision of price policies leading, in most countries, to some decline in consumers' pric levels until the late 1950s. Broadly, there was thus some coincidence of price reduction or stability in the period of the somewhat relaxed investment drives.[24] On the other hand, it would be misleading to identify the rather gentle price increases observed everywhere in the 1960s with the intensified investment effort. Other factors seem also to have been at work, such as the policy of improved material incentives to the farmers and the general attempts to raise consumers' prices closer to their market equilibrium levels.

As regards wage policy, two sets of problems can be distinguished, one concerned with the relative remuneration of groups of workers, and the other with individual rewards. In the early phase of accelerated investment the privileged position of workers in the productive sectors of the economy was particularly manifest, and at the same time special premia were attached to the intensity of labour input of individual workers.[25] During that period collective consumption concentrated typically on improving those aspects of general welfare which were most relevant to productive effort, such as education and health. The relaxation of the investment drive brought about significant changes of emphasis, if not of the basic principles of distribution. Tendencies appeared in the direction of narrowing the income gap between the productive and non-productive spheres and, in general, of improving the absolute and the relative position of those groups of the population not contributing directly to production, such as old-age pensioners. Reforms of the wage system tended to moderate the importance of quantity of output produced, and put increased stress on quality and cost reduction.

This development has been a continuous and, it seems, irreversible process. That is to say, there are no signs that the recent stress laid on investment might bring back the features of income distribution typical of the early investment phase. The reasons are easy to ascertain. In the first instance, the new investment phase began in conditions of much higher levels of economic development and income. Secondly, its intensity has been smaller than, and its main direction different from, the early effort. Particularly during the last years of the period under study, the main emphasis was placed on the rational and efficient use of resources rather than on the sheer volume of inputs. And these objectives are at the heart of the reforms of the planning and management system which were launched everywhere towards the end of the period under review.

In summary, the "investment-consumption-investment phasing", identifiable in most eastern European countries in the 1950-1965 period, was accompanied by modifications of incomes policies and of instruments for their implementation. The changes in resource allocation policy and in the use of inputs that occurred during that eriod also had important repercussions on internal arket stability. General imbalances of supply and emand were broadly characteristic of the early invest- ent period, when they were associated largely with bove-plan expansion of employment and failure to ise productivity in agriculture to a level adequate to ope with expanded demand for food in towns. Neither ome upward price adjustments nor control of peasant comes *via* the system of compulsory deliveries succeeded eliminating entirely the imbalance of supply and emand. During this period, some suppressed inflation, flected largely in queues and shortages, was tolerated y the planners.[26]

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[20] See also Chapter 9, section 9.3, for a fuller discussion of this effect.

[21] The network of nurseries and kindergartens expanded everywhere, but could never catch up with expanding demand.

[22] To a certain extent, these conditions were mitigated particularly in later stages by systems of family allowances, subsidies for children's clothing, etc.

[23] See Chapter 8, section 8.4, for a further discussion of the factors behind differentiation of incomes from work.

[24] The slight price increases observed in Poland and Hungary in the 1956-1958 consumption phase can be ascribed to "cost-push" inflationary pressures resulting from a wage-drift, rather than from deliberate policy.

[25] For a further discussion of the principles of distribution, of the wage system, and of wage differentials, see Chapter 8.

The monetary reforms of 1952-1953 created favourable onditions for some easing of pressures on consumers' arkets. Moreover, in the following period the large- ale recruitment of the rural labour force to industry nd construction slowed down, and in eastern Europe the radual completion of the collectivization process impro- ed central control over peasant incomes. At the same me, supplies of consumers' manufactured goods ended to improve, partly as a result of the growth of omestic output and of some relaxation of import estrictions. In some countries, however, the rigidity of ne price policy and the enforcement of some price eductions prevented *ex post* adjustments of demand and upply in specific markets.

In spite of setbacks in agricultural output, the second nvestment phase, which started generally in the late 950s, brought a further improvement in the overall equilibrium in the consumers' markets. On the demand side, this was due to some tightening up of wage discipline resulting from the reforms of the wage system, and to a greater elasticity of price policy, which prevented excessive expansion of real wages. On the supply side, rapid growth of output (and to a lesser extent imports) of consumers' durables and the creation of new outlets for consumers' expenditure, such as private and co-operative housing or foreign travel, helped greatly in mopping up the excessive purchasing power of the population and encouraged an increasing volume of savings. Failures on the agricultural front, only partly mitigated by more liberal import policies (particularly towards the end of the period under review), were mainly responsible for periodic shortages in the supply of animal products, particularly of meat, whereas the inability of industry to conform fully, and quickly enough, to the changing pattern of consumers' preferences was blamed for the coexistence of shortages of some manufactures with surpluses of others. Partial disequilibria in respect of agricultural products were aggravated by the incomes policy pursued, which generally concentrated on the expansion of incomes in the lower paid income bracket, where the income elasticity of demand for meat and dairy products was very high; and by price policy, which set out to maintain the prices of these products below the equilibrium level.[27] One of the main objectives of the recent reforms is the introduction of a system of prices which would ensure a closer correspondence between supply and demand with regard to both agricultural and industrial products.

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[26] See Chapter 9, section 9.1, for a theoretical treatment of the ubject.

[27] For a fuller discussion, see Chapter 10, particularly section 10.4.

7.2. THE PHASING OF RESOURCE ALLOCATION POLICIES IN INDIVIDUAL COUNTRIES

The purpose of this section is to trace the evolution of ncome policies and trends country by country and to dentify, as far as possible, their main phases. Attention centred on trends in, and the changing shares of, the ajor components of the end-use of national income -consumption and accumulation — and on those eatures of their disaggregation which give rise to policy ssues, such as the distinction between individual and ollective consumption. The analysis has had to be based, or the most part, on statistics of the material concept of ational income, although the wider — service inclusive — oncept, would seem to be more appropriate for the urpose. Whenever possible, however, supplementary aterial is used to throw light on trends in the disposable nd/or the final income of the population.

Inspection of year-to-year changes in the basic aggre- ates shown in Appendix Tables 7.IV and 7.V and in Chart 7.3 reveals a number of stages of evolution of ncome trends and policies in the individual countries hich are more or less homogeneous though varying in uration. As can be seen in summary Table 7.5, there are ome similarities between countries in the time sequence which the phases — which, as a rule, do not coincide ith the long-term plan periods — have followed one nother.

Czechoslovakia

The period of the First Five-year Plan (1949-1953) covers two sub-periods of completely opposite tendencies in the utilization of national income. Over the period as a whole, national income grew very fast, at a more or less even rate of about 9½ per cent a year (compared with 11.2 per cent planned). This rate of growth was largely determined by the expansion of industrial output which, measured by the global industrial index, was increasing at an annual rate of about 14 per cent a year. During the first two years of the plan period, however, agriculture progressed well, with a growth of 7 per cent per year (again in terms of global output), whereas it stagnated in the following three years. A feature of the first sub-period (1949-1950) was a very fast growth of consumption (partly associated with the expansion of non-agricultural employment of the order of 3.2 per cent a year on average), which was in fact more rapid than the growth of national income. The result was a decline in accumulation, the share of which was already rather low by eastern European standards.[28] In the 1951-1953 period, with the expansion

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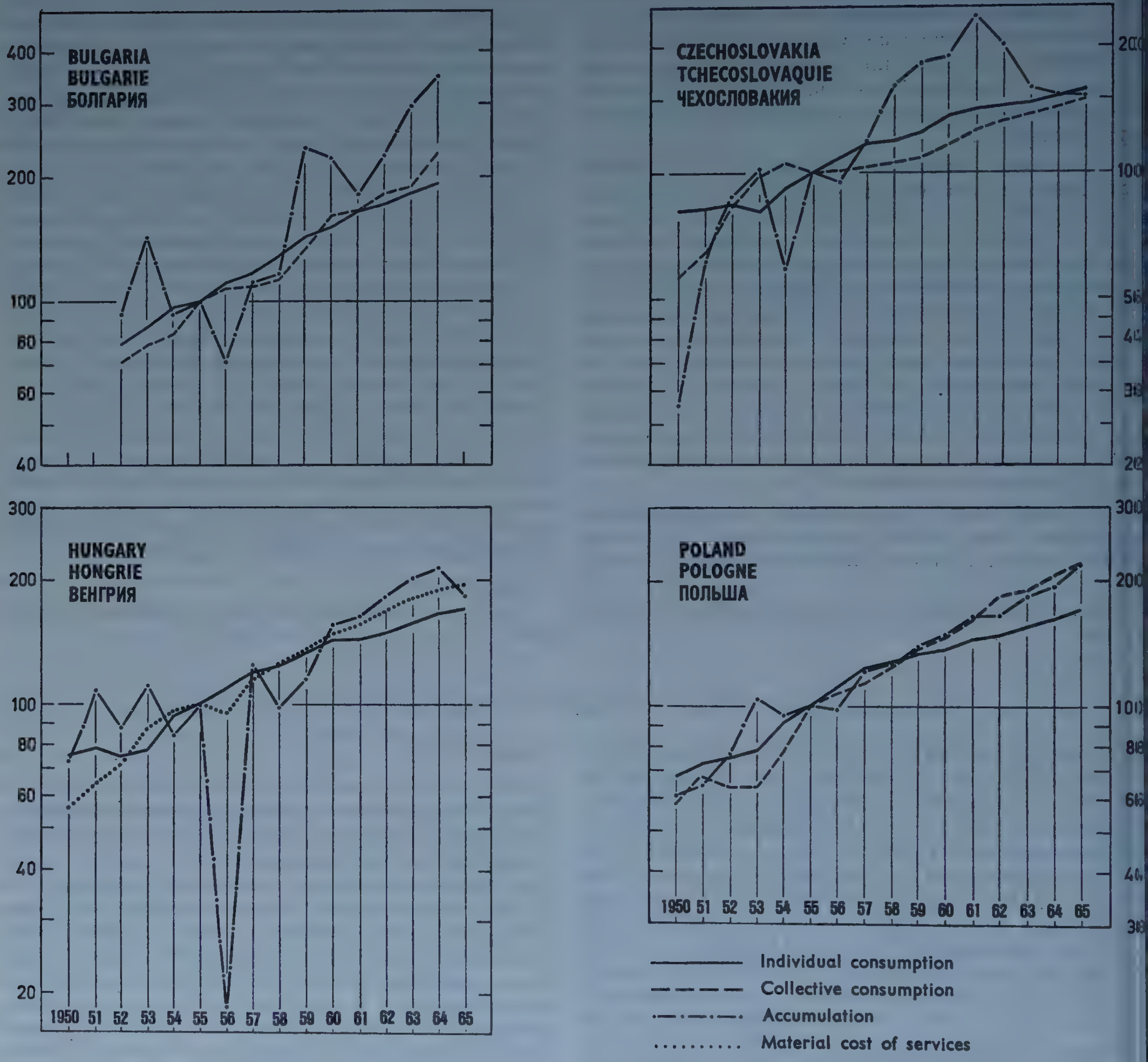
[28] However, gross investment outlays rose quite sharply, indicating that the trend in total accumulation was largely due to a substantial decline of stocks and other reserves.

CHART 7.3

Trends in individual consumption, collective consumption and accumulation

Index numbers, 1955 = 100



of national income distributed slowing down only marginally, the rate of growth of consumption decelerated greatly compared with the preceding period, whereas accumulation rose at a rate of 54 per cent a year, largely reflecting a high incidence of re-stocking. The changes in the structure of total consumption also went in opposite directions during the two periods : in 1949-1950 the emphasis was on individual consumption, with social benefits and state-provided services to the population making a rather small contribution to marginal increments in total consumption. In 1951-1953, on the other hand, individual consumption declined in absolute terms, while the volume of the "social welfare fund" rose steeply. It seems also that the part of total consumption unaccounted for — government consumption on non-welfare purposes — increased appreciably, partly no doubt on account of higher defence expenditure in the years of the Korean war.

The inflationary pressures present during these years were halted by a sweeping monetary reform in June 1953,

Utilization of national income and indicators of output in selected periods

Annual cumulative rates of change

Country and period	National income		Consumption				Accumulation		Global output		Employment outside agriculture[a]
	Produced	Distributed	Total	Individual	Material cost of services	Government	Total	Fixed assets	Industry	Agriculture	
Bulgaria											
1949-1953	11.1	..	10.1	..	..		..	12.1*	19.5	5.4	11.5
1954-1956	1.9	1.5	8.8	8.6	11.1		−14.7	23.8	11.0	−3.5	5.1
1957-1959	13.7	16.5	8.1	9.0	7.7		49.3	19.5	17.1	11.0	7.8
1960-1965	6.8	6.9	6.6	6.1	..		8.2	15.3	12.0	3.2	5.9
Czechoslovakia											
1949-1950	10.1	8.9	9.7	9.5	4.4	..	−2.7	..	14.8	7.2	3.2
1951-1953	8.9	8.6	4.2	−0.2	16.5	..	53.8	..	13.5	−0.5	2.8
1954-1957	6.6	6.9	7.5	9.6	5.0	..	3.9	..	8.7	3.1	2.9
1958-1961	7.3	7.2	4.8	4.7	4.6	..	18.9	..	10.7	1.8	2.8
1962-1965	0.9	0.7	3.2	2.9	5.5	..	−8.0	..	4.3	−0.5	2.2
Eastern Germany											
1951-1955	..	16.0*	16.0*	..	..	..	14.9*	..	13.6	..	3.7
1956-1960	..	8.0	6.7	6.8	5.1		16.0	20.0 [b]	9.2	..	0.4
1961-1965	..	2.9	2.2	2.2	3.1		6.3	5.6 [b]	5.9	..	—
Hungary											
1950-1951	18.7	16.8	8.8	5.3	19.1	31.3	50.9	36.0	24.9	10.9	6.7
1952-1955	3.8	3.7	6.5	6.2	11.7	3.2	−1.7	3.2	10.5	1.0	2.6
1958-1960	7.7	7.0	6.8	6.4	9.0	12.4	7.6	32.0	10.8	2.0	4.0
1961-1965	4.6	3.9	4.0	3.7	5.7	5.6	3.4	5.6	7.7	1.3	3.0
1958-1965	5.7	5.1	5.0	4.7	6.9	8.8	4.9	14.7	8.8	1.5	3.3
Poland											
1950-1953	9.7	9.7	5.6	5.6	5.0		27.0	22.2	21.5	1.0	9.5
1954-1957	9.0	10.3	12.3	12.1	15.4		4.2	6.2	10.4	5.0	3.8
1958-1965	5.6	5.2	4.4	4.1	8.9	8.2	7.5	9.1	9.1	2.6	2.8
Rumania											
1951-1953	16.5	..	..	..	..	..	..	33.9 [c]	19.1	10.5	9.4
1954-1958	6.2	..	..	..	..	..	..	2.8 [c]	9.8	0.8	1.7
1959-1965	9.6	..	..	..	..	..	..	16.4 [c]	13.4	4.4	5.8
Soviet Union											
1949-1953	14.4	..	..	..	..	..	..	13.8 [c]	16.5	1.5	3.8 [d]
1954-1958	10.9	..	.. [e]	..	..	..	..	15.1 [c]	11.2	8.3	4.1
1959-1965	6.8	6.3	5.5 [f]	..	..	..	..	7.4 [c]	9.1	2.0	4.5 [g]

Sources: National statistics; the SURVEY for 1960, Chapter VI.

[a] Including state agriculture, except in Czechoslovakia and the Soviet Union. The Hungarian data refer to active labour force at the beginning of the year.

[b] Productive fixed assets.

Total investment outlays.

[d] 1951-1953 period.

[e] Real incomes of the working population (per worker) went up by nearly 6 per cent a year over the period.

[f] Total real incomes of population.

[g] The rate is 4.2 per cent a year if allowance is made for the inclusion of members of industrial co-operatives in the "national economy" in 1960.

which prepared the ground for a fast increase in consumption levels, achieved partly by means of price reductions of consumers' goods, during the years 1954-1957. Although the rate of growth of national income dropped again (to below 7 per cent a year) — largely associated with a slow-down in industrial output — its whole impact fell on the investment sector, as total consumption kept rising at an average rate of 7.5 per cent per year and individual consumption at one of nearly 10 per cent.

Investment activity reached a peak during the following four-year (1958-1961) period, when total accumulation grew at an annual rate of nearly 20 per cent, and investment outlays at nearly 15 per cent. This apparently had a favourable impact on industrial output and hence on the volume of national income, as both these rates accelerated compared with the preceding phase. The growth of consumption slowed down markedly, however, from 7.5 per cent per annum in 1954-1957 to 4.8 per cent in 1958-1961.

The last distinct phase, covering the years 1962-1965, is one of general stagnation of the Czechoslovak economy. The rate of industrial expansion dropped to a yearly average of barely more than 4 per cent and agricultural output remained stationary. Over the period the volume of national income hardly changed at all, and the full weight of this setback was reflected in a decline in the accumulation ratio, largely due to destocking, as investment outlays declined only marginally. On the other hand, the total consumption fund kept rising at a rate somewhat faster than that of population, testifying to some slow improvements in living standards achieved largely through an expanding volume of social benefits and services.[29]

Eastern Germany

Analysis of trends in the utilization of national income in eastern Germany is hampered by lack of a comprehensive and fully comparable series of data covering the whole period under review. Index numbers of the basic series at constant prices have only recently been published, showing year-to-year changes in the main aggregates in the 1960 to 1965 period, with 1955 as base year; for the early 1950s only data at current prices are available. However, a graph reproduced in the 1965 Statistical Yearbook (p. 28), apparently based on data at constant prices, makes it possible to obtain at least the orders of magnitude of changes occurring in eastern Germany during its First Five-year Plan (1951-1955) (see Chart 7.4).

All available indicators point to the success of this plan. National income increased by about 70 per cent at current prices, and by some 110 per cent at constant prices, compared with a 60 per cent increase planned. This was made possible by a rapid expansion of industrial output at an average rate of about 14 per cent a year, and a fast growth of non-agricultural employment (3.7 per cent a year) due largely to the liquidation of urban unemployment and greatly increased economic activity rates among women. In 1950, accumulation was rather low by eastern European standards — abou 11 per cent at current prices. Although fast expansion c investment was one of the principal preoccupations c development policies during that period, the high rate c growth of national income made it possible to maintain rapid increase of consumption at the same time. Indeec the rate of the latter (about 16 per cent a year) exceede that of accumulation. Within global investment, howeve the share of productive investment increased markedl at the expense of the part directly affecting livin standards.

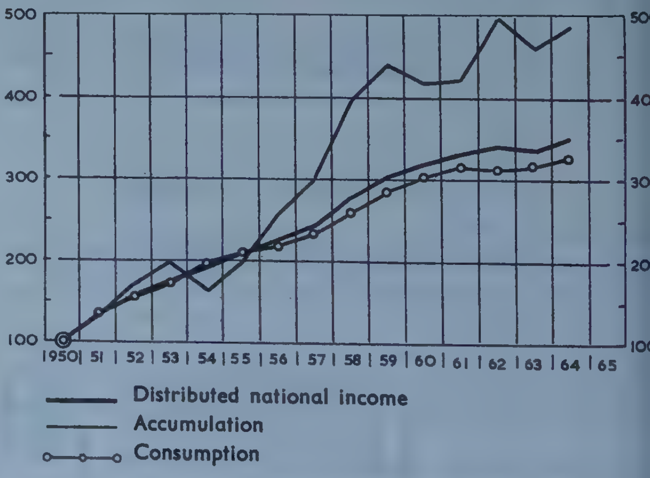
During the early 1950s, the improvements in livin standards in real terms were due to a large extent to policy of successive price adjustments which reduced th cost of living by about one-third between 1950 and 195 As, however, both employment and average nomina wages were expanding much faster than planned, wherea supplies lagged behind, signs of inflationary tension appeared in 1952 and, more acutely, in 1953, necessitatin a number of deflationary measures, including som tightening of working norms, price increases of som necessities, and changes in the rationing system. Some o the more unpopular measures were subsequently re scinded, and attempts were made to improve the overal market equilibrium by better supplies of consumers goods, in the short run by releasing government reserve and increasing imports, and in the longer run by revisin upwards the annual plans for consumers' goods an agriculture.

To judge from the fragmentary data available, gains i welfare slowed down considerably during the firs years of the Second (1956-1960) Five-year Plan. Durin the whole quinquennium the emphasis was certainly o accumulation: with national income increasing b 8 per cent on average, i.e. at half of the rate registered i the preceding five years, the rate of growth of accumula

CHART 7.4

Trends in national income, accumulation and consumptio in eastern Germany

Index numbers, 1950 = 100



Source: Reproduced from the *Statistical Yearbook 1965*, p. 28

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[29] The Five-year Plan (1961-1965), which postulated an annual growth of national income of 6.9 per cent and of individual consumption of 5.6 per cent, was abandoned in the summer of 1962.

on was maintained at its previous high level of about 5 per cent a year.[30] Moreover, the gap between the rowth of investment in productive and non-productive pheres further widened. As a result, by 1960 the share f total accumulation in distributed national income xceeded 18 per cent (compared with less than 13 per ent in 1955), of which as much as 10.4 went into pro-uctive assets. Over the period, the total consumption und was increasing at an average rate of less than 7 per ent, compared with a growth of productive assets of 0 per cent per year. In contrast to the preceding phase, hen the emphasis was on collective consumption (and pecially on that part directly affecting living standards), n the 1956-1960 period the latter hardly kept pace with ndividual consumption.

As in Czechoslovakia, the 1960s saw a marked decele-ation in the rate of growth of national income in eastern ermany. In the years 1961-1965 it was below 3 per cent er year. Accumulation rose faster — at an annual rate f about 6 per cent over the five years — to a peak in 962 when it took more than 20 per cent of national ncome. In the 1960s, the fluctuations observed in the level f accumulation were due principally to changes in the evels of stocks and to a continuous — though slow — rowth of investment in fixed assets; the level of non-roductive investment, on the other hand, remained irtually unchanged. Total consumption expenditure also ose very little between 1961 and 1965, the only dynamic onsumption category being the welfare part of collective onsumption, which rose by nearly 30 per cent. This eriod was characterized by stability of employment, and s population numbers declined somewhat, per capita rends were slightly more favourable to the consumer than ggregated trends.

oland

The planned economic expansion embarked upon in oland at the turn of the 1950s has been pursued through hree medium-term plans: the Six-year (1950-1955) lan, the First Five-year (1956-1960) Plan, and the econd Five-year (1961-1965) Plan. As with most other astern European countries, however, an analysis of the attern of resource allocation reveals little conformity etween its timing and the timing of the medium-term lans. Indeed, it has become customary in Poland to istinguish between the "development stages" and the ormal plan periods. The timing of the former is usually elated to the years 1950-1953 (investment phase), 954-1957 (consumption phase), and 1958-1965 (renewed lthough less vigorous investment phase).[31]

The common characteristic of the first two phases was high rate of growth of national income, which averaged about 10 per cent a year in each phase.[32] Otherwise, there were marked differences in both output and distribution. The early 1950s were often referred to as years of unremitting industrialization. With agricultural output virtually stagnant, global industrial output grew over the years 1950-1953 at an average rate of nearly 22 per cent a year, supported by a massive inflow of labour [33] and a vast investment programme. Over the three years 1951-1953 industrial investment outlays doubled, whereas expenditure on agriculture remained unchanged.[34] Thanks largely to increased employment opportunities and to gains in the personal incomes of rural emigrants, the total consumption fund was growing at an average rate of 5½ per cent, but — for the reasons mentioned in the preceding section — real wages per wage-earner declined.

Since the relationship between the levels of consumer- and producer-goods prices varied a great deal over time, it is difficult to measure the proportion of resources devoted to accumulation during this period. Measured in terms of the price relatives prevailing in 1950, the accumulation ratio was raised from 22 per cent in 1949 to more than 40 per cent in 1953; [35] but at 1956 prices, the ratio amounted to 28 per cent at the later date.

The pattern of development during the years 1954 to 1957 was in many respects the opposite of that in the preceding phase. On the output side, owing partly to increased investment and to increased material incentives, agricultural output recovered and produced average annual gains of 5 per cent a year. At the same time the tempo of industrial expansion was halved by comparison with the first phase, although remaining at the high average level of 10 per cent a year. On the expenditure side, the rate of expansion of fixed assets fell to about 6 per cent per year, and that of accumulation still more, indicating reduced inventory formation. On the other hand, thanks to improved domestic supplies of agricultural products, to the release of government-held stocks (particularly in 1956) and to increased imports — consumption shot up to a rate of about 12 per cent a year. In contrast to the preceding stage, collective consumption increased faster than individual consumption and — given the improved international situation — a shift favouring the consumer may be presumed to have taken place within aggregate collective consumption.

It is more difficult to identify the beginning of the third phase of development. The year 1957 was already rather unusual, with an 11 per cent increase in produced national income but a considerably faster (nearly 14 per cent) growth rate of distributed income. This permitted both the maintenance of a fast growth of consumption and a further acceleration of the growth of accumulation and of fixed investment. But the real change in trend occurred a year later, in 1958, when the rate of expansion of national income produced slowed down to about 5 per cent, and that of distributed income to about 3 per cent. The full impact of this slackening fell on individual consumption, as the policy of sustaining a high volume of investment was continued. Subject only to minor oscillations due to irregular movement of stocks (particularly in the agricultural sector), this policy prevailed throughout the 1958-1965 period, and the accumulation ratio rose (in 1956 prices) from 22 per cent in 1958 to 25 per cent in 1964. Over this period as a whole, the volume of fixed investment rose at an annual rate of nearly 9 per cent, compared with a 6 per cent rate registered in the consumption phase, and there was again a shift in favour of productive sectors. With investment in industry moving up rapidly,[36] the expansion of industrial output was maintained at almost its previous high level, in spite of some slowing down in the rate of growth of employment. Agricultural output, however, did not match expectations, notwithstanding a continuous increase in inputs. The outcome was again an intensified pressure on resources, and a significant slow-down in the growth of real incomes.

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[30] This phase ended in 1959, when the accumulation ratio reached ts peak. As indicated by trends at current prices and by the diagram eferred to above, the level of accumulation actually declined n 1960.

[31] There is some disagreement between Polish economists concern-ng the year 1958; J. Pajestka (*Gospodarka Planowa*, No. 5, 1964) ncludes it in the consumption phase, whereas L. Zienkowski *Dochod Narodowy Polski 1937-1960*, Warsaw 1963, p. 225) and R. Chelinski (*Ekonomista*, No. 5, 1964) regard it as marking the beginning of the new investment phase.

[32] However, as the data in Table 7.5 show, the produced national income grew somewhat slower during the second than during the first phase, the opposite being true of distributed income. Clearly, the economy was running a substantial import surplus during the consumption phase.

[33] Employment outside state agriculture went up by 44 per cent over the four years.

[34] Agricultural investment in the predominant private sector declined by 40 per cent.

[35] These ratios would be still higher but for the fact that already in 1950 (i.e. in the year serving as a price base) considerable subsidies were paid to the producer-goods sector, while most of the public revenue was obtained from turnover taxes and profits levied largely on consumers' goods.

The shift from individual to collective consumption, already observable during the second phase, was further accentuated in the last phase, when the latter was increasing twice as fast as the former; and within collective consumption the part related to welfare services expanded slightly at the expense of outlays on administration and defence.

In spite of some apparent similarities, the parallel between the first and the third phases of development should not be taken too far. For one thing, the third phase occurred during a much slower growth of national income. Secondly, the stress on investment priority was less pronounced in the third than in the first phase. Finally, employment policy was different in the last phase, when an attempt was made — more or less successfully — to restrict the growth of the non-agricultural labour force in order to control the expansion of the wage-fund. In effect, the difficulties encountered in preventing market disequilibria in this phase were of a quite different order from those in the earlier investment period.

Hungary

The sharp year-to-year changes in the size and the distribution of national income which characterized the development of the Hungarian economy during most of the 1950s make it difficult to distinguish homogeneous phases of growth. Naturally, in Hungary — as in all other countries of the area — rapid industrialization was dominant policy objective throughout the period unde study; and both the means of achieving this objective an their bearing on the pattern of utilization of nationa income were also basically similar. Nevertheless, th continuity of policy and the growth attained were adversel affected by the presence of such specific factors as th high share of agricultural output combined with wid fluctuations in production (affecting not only the level o consumption but also the rate of stock accumulation) the variation in the incidence of reparation payments an of foreign aid over time, the disappearance of importan capacity reserves in later years, the 1956 events and, las but not least, the rather frequent changes in administratio reflecting policy differences.

The decade opened with two very good years, durin which the national income rose by more than one-third thanks largely to a rapid expansion of industrial an agricultural output: global industrial output went up b some 50 per cent and that of agriculture by more tha 20 per cent. Fuller utilization of existing capacities b mobilizing labour reserves in the non-agricultural sectors supported by new investment projects, were among th factors which made this rate of expansion possible Although the main beneficiary was the investmen sector — total accumulation doubled and that in fixe assets rose by three-fourths — total consumption als grew relatively fast, at about 9 per cent per year. However the pattern of consumption was significantly transforme in a rather unfavourable direction for the consumer Individual consumption grew on average by only abou 5 per cent a year and the welfare component of collectiv consumption by nearly 20 per cent per year; but government non-welfare expenditures shot up by over 30 pe cent a year — chiefly reflecting the increasing cost o defence.

During the following six years, that is in the perio 1952-1957, the produced national income actually declined in three years (1952, 1954 and 1956), but ros steeply in at least two other years (by about 13 per cen in 1953 and by nearly one-fourth in 1957). The fluctuation in distributed income were smaller until 1955, but i 1956 this aggregate declined more than, and in 1957 i rose much faster than, the produced income. With th volume of individual consumption unchanged, the year 1952-1953 were not favourable to the consumer, wh benefited somewhat, however, from much increase expenditure on social welfare. Continuing its earlie trend, government expenditure sharply increased in bot these years, particularly in 1952 and in spite of a reduce volume of total income. At the same time the expansio of fixed assets continued on a high, though diminished level. The new administration, installed in mid-1953 introduced remarkable changes in these proportions In 1954 the whole decline in national income (distribute national income fell by 3 per cent) was reflected in reduced volume of fixed investment (by nearly 20 pe cent) and of public consumption (by 30 per cent), whil individual consumption rose by 20 per cent; but in th relatively good year of 1955 private consumption an fixed investment grew in parallel.

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[36] Over the years 1958-1964, investment outlays in industry grew at 8.6 per cent per year, compared with a rate of 1½ per cent in the preceding phase.

Although, for the reasons mentioned, the 1952-1955 riod cannot be said to amount to a "development ase", it has — taken as a whole — some features ich contrast strongly with the policies of the earlier ars. Thus, there was a marked slowing down in the pansion of industry and agriculture, reflecting a greatly duced rate of growth of national income; and the rate expansion of non-agricultural employment dropped m nearly 7 per cent to about 2½ per cent a year. ain, over the period as a whole, the consumption fund ew much faster than national income, reversing the eviously prevailing trend. The accumulation ratio, ich had risen from 17 per cent of distributed national come in 1949 to 30 per cent in 1951, declined again to out 25 per cent in 1955.[37]

The distorted trends in the two abnormal years — 1956 d 1957 — were to a large extent compensatory, except at in each year total consumption went up by the entical margin of 9 per cent. In 1956, a year when oduction came to a standstill in the last quarter, and tional income declined by some 12 per cent, the rise consumption was achieved by a contraction of invest- ent and running down trade inventories and state serves. The recovery of 1957, when distributed national come was up by nearly one-third, hardly affected the rection of trends in fixed assets and in government nsumption, as both these categories continued to fall volume. The bulk of the increment in national income that year went into stock replenishment, as indicated the sixfold increase in total accumulation.[38]

By contrast with preceding years, the post-1957 period characterized by continuity of economic policy. oreover, for the first time two successive medium-term ans — the Three year (1958-1960) Plan and the Second ve-year (1961-1965) Plan — have run their full course, making possible a comparison of their achievements with their objectives. Taken as a whole, this period has many features in common with Poland's contemporary development phase. It can be described as a new investment phase — though one on a much smaller scale than its predecessor of the early 1950s, and at a time when the pace of overall economic growth has been much reduced. Less concern with rates of growth, more efficient instruments of economic control, and the slower expansion of non-agricultural employment have all helped to improve the overall supply/demand situation[39] and facilitated the attainment of some stability of development.

The periods of these two short-term plans, which make up the latest stage of development of the Hungarian economy, have features relevant to incomes policies. In particular, fixed assets expanded fast in the years 1958-1960, at a rate reminiscent of the early 1950s, even though the consumption/accumulation ratio remained unchanged. During the Second Five-year Plan, on the other hand, the earlier rate of expansion of accumulation was maintained but the rate of growth of fixed investment fell abruptly. Thus, the share of fixed investment (in 1959 prices) rose from 11 per cent in 1957 to a record figure of 19 per cent in 1960, but then declined before attaining the 1960 level in 1965.

As they were based on the still somewhat confused 1957 situation, the proportions postulated by the Three-year Plan were cautious and, in particular, provided for very small increases in consumption. In reality, however, national income for distribution increased nearly three times as quickly as planned (and national income produced twice as fast) permitting a substantial overfulfilment of both the investment and consumption plans:[40]

Percentage change over preceding year

	1950	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*
National income produced.	20.6	17.1	−1.9	13.1	−4.1	8.9	−10.8	23.3
National income distributed.	15.6	18.1	−1.0	12.8	−3.2	6.6	−11.7	31.8
Total consumption . . .	10.9	6.9	7.8	8.0	6.3	4.0	7.1	8.4
of which:								
Private consumption	6.1	4.4	— 4.1	3.2	20.2	7.0	9.0	9.0
Material cost of services provided to population . . .	23.8	14.6	11.5	22.4	9.4	4.0	— 4.0	19.6
Government consumption. .	44.8	19.1	67.0	19.4	— 29.5	— 19.2	— 8.3	— 5.1
Accumulation	54.3	48.2	−18.1	25.5	−24.1	19.1	81.7	582.0
of which:								
Net increase in fixed assets .	20.5	53,8	20.0	8.9	— 18,5	6.7	— 11.9	— 8.1

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[37] The share of fixed assets in national income was lowest in 50, when it amounted to 11 per cent, and reached its peak in 52 and 1953 by which time it had risen to 18 per cent.

[38] The share of investment in stocks in national income, which d amounted to 4 per cent in 1956, rose to 15 per cent in 1957.

[39] However, as in other countries, problems of the structura adaptation of supply to demand have become more acute at the higher level of consumption reached.

[40] A part of the increase in consumption in 1960 was due, however, to the impact of the collectivization drive of that, and the preceding, year on trends in peasants' personal consumption. Although peasant incomes stagnated in 1960, consumption went up following the liquidation of private assets, and this occurred either directly, through increased "self-consumption", or indirectly from proceeds of sales to the collective.

On the whole, the reduced consumption targets were very nearly met during the period of the Five-year Plan, even though national income was increasing at a rather lower rate than planned (produced national income rose by 25 per cent compared with 36 per cent planned), but this was achieved at the cost of a substantial foreign trade deficit in the years 1962-1964, and of the investment squeeze already mentioned. As in the preceding years, the share of collective consumption was steadily increasing.

Targets and achievement of the Three-year (1958-1960) Plan in Hungary

Index numbers, 1957 = 100

		1958	*1959*	*1960*
National income for distribution	*Plan* . . .	97.5	104.1	107.9
	Actual . .	99.4	109.1	122.4
Total consumption	*Plan* . . .	106.3	108.5	111.2
	Actual . .	105.0	113.6	121.8
of which:				
Consumption of the population	*Plan*	106.4	108.2	111.0
	Actual . . .	104.3	112.4	120.1
Accumulation	*Plan* . . .	52.6	71.1	76.8
	Actual . .	78.6	92.5	124.1
of which:				
Fixed assets	*Plan*	130.8	148.4	155.8
	Actual . . .	154.9	171.0	236.7

Bulgaria and Rumania

At the end of the 1940s both Bulgaria and Rumania were still predominantly agricultural economies. In both countries the rural population and agricultural employment accounted for about three-quarters of the respective totals (see Table 7.3), whereas the share of agriculture in net (material) product amounted to some 30-40 per cent.[41] It is not surprising, therefore, that in both these countries the size and composition of the national income (produced and distributed) was governed to a large extent during the 1950s by the fluctuations in the volume of agricultural output — fluctuations which were, on account of climatic conditions, often extremely sharp (see Chart 7.1). Thus, in both countries the produced national income declined twice during the 1950s as a result of falls in agricultural output: in 1952 and 1954 in Bulgaria, and in 1952 and 1956 in Rumania. Moreover, the importance of the agricultural sector was very manifest in the pattern of utilization of the distributed national income, through its impact on the rate of stock formation. No data are available for Rumania, but the Bulgarian accounts show quite remarkable fluctuations in the share of this category (which includes also the
increment in the value of non-completed project
affecting greatly the shares of consumption and
investment in fixed assets in total income.[42]

Again, both countries attained considerable success
in the fulfilment of their First Five-year Plans — coveri
the years 1949-1953 in Bulgaria, and 1951-1955 in Rum
nia. With national income growing at an average ra
of nearly 14 per cent per year, the Rumanian performan
seems to have been based on a more balanced develo
ment of the economy, whereas in Bulgaria, where t
overall rate of growth was somewhat smaller, emphas
was centred on the growth of industry and the expansi
of labour reserves (see Table 7.5). However, supplies
consumer goods did not keep up with the rates of e
pansion of employment and of total incomes of popul
tion and some strains appeared in the consumers' market
partly remedied by the monetary reforms introduced
both countries in 1952-1953.

A marked slowing down in the rates of expansion
employment and of agricultural output was typical
both countries of the few following years, which can
identified as the second development phase. In Bulgari
this period includes the years 1954-1956 during whic
the national income almost stagnated, whereas in Rum
nia it covers the years 1954-1958, when this rate droppe
to about 6 per cent a year. From a historical perspectiv
these stages seem to represent periods of consolidation
previous gains. This is particularly true of Bulgari
where the following three years (1957-1959) culminate
in an abrupt upsurge in investment and output, distribute
national income increasing at an average of near
17 per cent per year over the three years, and by as muc
as 29 per cent in the year 1959 alone. In Rumani
where the recovery also relied greatly on an accel
rated rate of expansion of employment, the contra
between the new and the preceding phases was als
striking.

On account of the marked differences in investment
stocks (including work in progress) and in fixed asset
it is rather difficult to discern clear-cut stages in t
consumption/investment policies pursued in Bulgari
During the period of the First Five-year Plan (194
1953) both total accumulation and fixed investme
expanded rather faster than consumption, although t
rate of growth of the latter was only slightly below th
of national income. In the following three years consum
tion grew faster than national income, however, whi
fixed investment continued to expand rapidly. Th
development seems to have been due to the policy
cutting back new investment projects (which had t
effect of reducing the volume of uncompleted projec
and increasing that of installed capacities), combin
with a considerable drop in agricultural stocks followi
the bad harvests in both 1954 and 1956.

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[41] These percentages are usually considered as understating the real shares; first, because in the method of calculation used the turnover tax is lev ed exclusively on industrial output; and, second, because the value of self-consumed agricultural output is expressed in relatively low producers' prices. See "A note on some aspects of national accounting methodology in eastern Europe and the Soviet Union", the *Bulletin*, Vol. 11, No. 3.

[42] For instance, the increase in the share of total consumption
Bulgaria from 76 per cent in 1952 to 86 per cent in 1956 was alm
entirely due to a drop in investment in stocks and in non-complet
construction, the share of which in national income declined fr
14 per cent in 1952 to one per cent in 1956; and opposite trends led
the decline in the share of consumption to 73 per cent in 1960.

The new investment drive, started in 1957 and pursued gorously in 1959 (when total accumulation doubled d fixed investment rose by two-thirds), was not incomtible with the maintenance of rather high rates of ogress in living standards, chiefly because of very good ricultural results during these years and a considerable port surplus. The strains consequent on the 1959 oduction effort were reflected, however, in a very slow owth of distributed national income in 1960 and 1961, ain accompanied by destocking. After 1962, investent seems to have revived and the rate of growth of nsumption also accelerated from the rather low 1962 vel; nevertheless, the gap between the rates of expansion consumption and of investment widened and in 1964 nsumption fell to 69 per cent of national income.

No consistent policy with regard to the composition total consumption can be detected during the period der study. Individual consumption seems to have been latively favoured during the first and the third phase dicated in Table 7.5, whereas the opposite was true ring the second and the last phases.

Notwithstanding the great scarcity of statistics relating the trends and distribution of national expenditure, ere is no doubt that in Rumania the early 1950s saw upsurge of investment activity. During the years 51-1953, when produced national income rose by per cent, the total volume of investment outlays went by 140 per cent. As employment outside agriculture as in 1953 more than 30 per cent higher than in 1950, ere was clearly little scope for an increase in the average al incomes of the population. In fact, as already entioned, inflationary pressures necessitated a number remedial measures. Thus, a monetary reform in 1952, hich mopped up the bulk of the accumulated savings the population, was followed in 1953 by a deliberately eflationary policy which resulted — during the two llowing years — in an almost complete halt to any rther expansion of investment and employment. The are of consumption in national income increased mewhat (the accumulation ratio, which exceeded 30 per nt in 1951-1953, was planned to decline to 27.8 per cent 1953-1955), allowing some expansion of average comes.

This stabilization policy continued until about the end 1958. During these five years (1954-1958) total investent outlays were expanding at a low average rate of ss than 3 per cent per year, i.e. considerably slower than tional income. Moreover, the expansion was much ore rapid for "non-productive" expenditure, which se by 43 per cent compared with an increase of only per cent in productive investment; and within the tter, outlays on agriculture nearly tripled whereas ose on industry rose by only 4 per cent. Thus, there ust have been some gains in total consumption.

The year 1959 marked in many respects the beginning a new phase in the evolution of macro-economic licies in Rumania. Fixed investments were rapidly creased and their composition changed as, in contrast ith the previous phase, priority was given to directly oductive expenditure, particularly to industrial investent. Preference was also given to those investment projects which improved the external balance and permitted a better use of capacities in processing industries. Revived foreign trade activity was concentrated on imports of modern equipment. Employment policy became active once again, stimulated by the expansion of investment, particularly in the construction sector.[43] The acceleration of the collectivization campaign contributed to an increment of nearly 40 per cent in non-agricultural employment over the period. All these developments took place in conditions of dynamic change, so that the apparent increase in the investment ratio was not incompatible with an increase in the absolute level of consumption. Statistics are scarce, but as the growth of produced national income was in the region of 10 per cent a year, an increase in the consumption fund of the order of some 5-6 per cent a year could easily have been accommodated.

The Soviet Union

As in most eastern European countries, a decelerating growth of national income characterized the development of the Soviet economy during the period under review. However, as far as the available data indicate,[44] the phasing of macro-economic policies was somewhat different in the Soviet Union from that of the majority of eastern European economies. The equivalent of the "investment boom", which was almost universal in eastern Europe in the early 1950s, had, of course, taken place in the Soviet Union much earlier, at the beginning of the plan era in the late 1920s and early 1930s.[45]

In fact, in the years 1949-1953 when the Soviet national income was growing at the high average rate of nearly 15 per cent, investment outlays were increasing more slowly and — judging by the trends in real wages of wage-earners and real incomes of peasants [46] — also slower than the consumption fund. This conclusion is confirmed by the data furnished by Soviet authors,[47] according to whom national income produced rose by 71 per cent over the period of the Fifth Five-year Plan (1951-1955), with accumulation increasing by some 60-65 per cent and consumption by some 70-73 per cent (at constant prices); and between 1950 and the peak year of 1954, the share of consumption rose from 76.1 per cent to

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[43] The labour force in building, which in 1958 was 18 per cent below the 1953 peak, rose by 56 per cent between 1958 and 1964.

[44] No systematic series of data at constant prices have as yet been published on the trends and composition of Soviet expenditure. As with Rumania, the following analysis therefore relies largely on data on investment outlays and, for the Soviet Union, on indices of the real incomes of the population.

[45] During the First Five-year Plan, the accumulation ratio went up at current prices from 19.4 per cent in 1928 to 26.9 per cent in 1932; and as consumer prices increased much faster than the prices of investment goods, these figures certainly understate the extent of the real shift in the basic proportions.

[46] Over those five years, average real wages went up by some 11 per cent per year and real incomes of peasants by about 12 per cent.

[47] A. G. Aganbegian and V. F. Mayer, *Zarabotnaya plata v SSSR*, Moscow 1959.

77.0 per cent, at current prices.[48] Moreover, there was no parallel between this stage of Soviet development, and contemporary events in eastern Europe, in respect of internal market stability. The Soviet anti-inflationary monetary reform took place earlier, in 1947, and it prepared the ground for a subsequent policy of price reductions which was facilitated by the absence of an "employment explosion" on the scale experienced by most eastern European countries. However, some price cuts decreed during the period, particularly in its later years, were apparently too deep, inasmuch as they aggravated existing shortages of foodstuffs; and a certain imbalance between the growth of average wages and of labour productivity caused concern and led to restraints on the rate of growth of consumption during the following stage.

If the 1949-1953 period had some features of a "consumption phase", a different pattern emerged in the following five years (1954-1958). A characteristic of this period was the more balanced growth of the economy, reflected in a rapid expansion of agricultural output, itself a result of an extensive development of virgin lands in the East. Produced national income was growing at some 11 per cent a year, investment outlays were rising considerably faster — by some 15 per cent per year, and the growth of consumption must have slowed down, both in relation to national income and to the previous trend; by 1958 the share of consumption fell again to 72.7 per cent of distributed income at current prices. It seems, however, that a shift in the structure of investment took place during the later years of this phase, in a direction favourable to the consumer. No yearly data are available for the years 1954 and 1955, b compared with the period of the Fifth Five-year Pla (1951-1955) as a whole, there was in the years 1956-19 a clear increase in the share of investment going agriculture, the consumer-goods industries and, abo all, housing.[49]

The predominance of investment over consumptic was also written into the Seven-year Plan (1959-1965 but the postulated margin of difference was not ve large. Over the whole period, the accumulation fund wa planned to rise by some 68-72 per cent and consumptio by some 60-63 per cent. In the event, the gap must hav been considerably wider. According to one source, during the last five years of the Seven-year Plan perio (1961-1965) the accumulation fund increased by 42 pe cent compared with a growth of consumption by 30 pe cent. At current prices, the share of consumption i total distributed income was in 1965 at about the 195 level, indicating a fall in real terms. For the period of th Seven-year Plan as a whole, expenditure on dwelling was much above the level of the preceding plan period but the annual trend during the Seven-year Plan perio showed a continuous decline from the 1959 peak. On th other hand, investment in agriculture rose continuousl and rapidly, and was in 1965 nearly twice as large as i 1958. Judging by data at current prices, collective con sumption (inclusive of government expenditure on nor welfare purposes) grew considerably faster than individua consumption over the 1959-1965 period.

7.3. THE GROWTH AND COMPOSITION OF THE TOTAL INCOME OF THE POPULATION

Material consumption and total income of population

Living standards are conventionally measured by the total income of the population (including net borrowing), a concept which corresponds approximately to total consumption of goods and services *plus* real (private) investment (accumulation) *plus* financial investment (in practice, increase in cash and deposits). It follows that the trends in material consumption, discussed in the preceding sections, provide only an approximation to changes in the living standards of the populations concerned. As it is generally recognized that the coverage of material consumption is too narrow for measuring such changes, the concept (and index) of total population income in one form or another has been in use in most centrally planned economies, which better reflects gains in living standards.[51] Unfortunately the use of such indicators has not been universal, nor have the methods used been applied consistently (or the results publishe throughout the period under study. Moreover, the actua coverage has varied between countries and in some case over time.

It is therefore of interest to examine the trends ove time in the main income categories which account for th difference between the concept of material consumptio and total population income in order to discover whethe any generalizations can be made concerning the conver gence or divergence of trends in the two aggregates ove the period under study.

The data compiled and published by the Centra Statistical Office of Hungary since 1959 permit a fu reconciliation of material consumption — a (materia national income category — with the concept of tota income of population. The following arrangement e 1964 data (at current prices) brings out the basic oportions:

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[48] *Vestnik statistiki*, No. 4, 1966. Since during this period the ratio of consumer-goods' to producer-goods' prices declined, the real increase in the share of consumption must have been much greater.

[49] Thus the share of investment in housing increased from le than 20 per cent in 1951-1955 to more than 25 per cent in 1958, an this took place mainly at the expense of expenditure on produce goods industries (Group A), the share of which fell from 39.2 t 32.5 per cent between the two periods.

[50] I. Malishev, *Pravda*, 24 May 1966.

[51] In addition to the question of coverage there is a further complication due to the problem of pricing. It is a usual national accounting practice in the centrally planned economies to express the value of the part of agricultural output consumed by the producers ("peasants' self-consumption") in prices paid for their deliverie However, the use of usually much higher consumer prices is co sidered more appropriate for measuring the absolute and relativ levels of living standards of the farming population.

	Million forints	*Percentages*
Individual material consumption [a]	108 756	73.6
of which: unpaid	7 265	4.9
Material cost of non-productive consumption services [b]	12 836	8.7
of which: unpaid	7 703	5.2
aterial consumption of population	121 592	82.3
Non-material cost of non-productive consumption services [b]	10 368	7.0
of which : unpaid	7 528	5.1
Correction for valuation of self-consumption	6 060	4.1
tal consumption of population	138 020	93.4
Increase in savings and cash holdings	5 127	3.5
Private investment in: housing	2 875	1.9
agriculture	373	0.3
Current financial expenditures [c]	2 276	1.5
Net credit transactions	—954	—0.6
tal (after tax) income of population	147 717	100.0
of which:		
Total (after tax) disposable income [d]	125 221	84.7
Total value of unpaid goods and services	22 496	15.3
of which: material costs	14 968	10.1
non-material costs	7 528	5.2

ncluding "productive" consumption services such as passenger transport and ome communal services (gas, electricity, laundries, etc.).

e. excluding state-provided non-welfare services such as defence, administration, etc.

lembership fees, sport lotteries, etc.

ncluding self-consumption.

The noteworthy differences are those between the ain aggregates: material consumption of population self a sum of individual material consumption and of e material cost of non-productive services such as alth and education), total consumption of the popula- on, and total income of population. The shift from the aterial consumption to the total consumption of the opulation involves two stages. In the first instance, e value of the non-material cost of non-productive rvices (such as wages in health and education) have to added to the former, thus moving from the material the service-inclusive concept of national income. condly, as already mentioned in footnote 51 (p. 22) ove, it is normally necessary to re-value upwards the tional income assessment of the self-consumption of ricultural product. A part of the total income of the pulation is saved or otherwise spent on non-consump- on purposes. In conditions of socialized means of pro- ction, private physical investment is largely related housing, although peasants' investment in their lividual plots may in some instances be significant.[52]

Part of the value of goods and services consumed ring the year is paid for by the state, from what is metimes called a social welfare fund; and the total come of the population can accordingly be broken down o the part which is paid for by the consumer, and is therefore at his disposal, and the remainder, which has the nature of government determined social benefits.

It can be seen that in Hungary in 1964 individual (material) consumption amounted to nearly three-fourths of the total income of population, whereas the share of material consumption of the population exceeded 80 per cent of that total. The non-material cost of non-productive services practically equalled that of material cost, while the correction for valuation of self-consumption took about 4 per cent of total income.[53] Thus the total consumption of the population was responsible for nearly 95 per cent of the total (after tax) income of the population.[54] Of the total income, about 85 per cent represented the disposable part and 15 per cent the direct state contribution. Very similar proportions were obtained by L. Zienkowski in his estimates of the breakdown of the total income of the population of Poland in 1955 and in 1960:

	1955	*1960*
Material consumption	89.7	85.2
Non-material services	7.6	10.3
Total consumption	97.3	95.5
Increase in financial assets	1.1	2.6
Investment [a]	1.6	1.9
Total income of population	100.0	100.0

Source: L. Zienkowski, *op. cit.*, p. 266.

[a] Including change in livestock, which was negative in 1960.

Having determined the magnitude of the differences in the values of material consumption, total consumption and total income, the question arises whether the intervening elements moved over time in parallel with material consumption; or, in other words, whether there have been important divergences in the rates of change of material consumption and of total population income. Again, Hungarian statisticians have provided an answer — at least for recent years. The index numbers shown in Table 7.6 suggest that during the period 1959-1965 the trend in total consumption was almost identical with that in the material consumption of the population, and that this was largely due to the offsetting effect of the disproportionately high rate of growth of the non-material cost of services and the declining importance of the correction for the value of self-consumption. On the other hand, the total income of the population rose faster over the years 1960-1965 than total consumption. Until 1964 this happened in spite of a decline in private investment in housing, which was more than offset by a sharp rise in savings and cash-holdings; but in 1965 there seems to have been a shift from financial to real assets. Moreover, relative trends were much influenced during this period by changes in private agricultural

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[2] This was, of course, particularly true prior to collectivization, l is still true in Poland.

[53] A calculation made by the Central Statistical Office of Poland for the years 1954 and 1955 yielded an estimate of 14-15 billion zlotys for this adjustment, which — at the time — amounted to about 10 per cent of individual material consumption. (*Dochod Narodowy Polski, 1954-1955*, Warsaw 1957.)

[54] The total before tax income was about 5 billion forints (or 4 per cent larger).

TABLE 7.6

Trends (in constant prices) in consumption, total income and main sub-aggregates, Hungary, 1959-1965

Index numbers, 1960=100

Indicator	1959	1960	1961	1962	1963	1964	1965
Material consumption of population [a]	93.5	100.0	101.4	105.5	111.5	117.8	121.2
Non-material part of services	89.3	100.0	102.8	108.8	116.1	125.3	128.0
Correction for valuation of self-consumption	108.0	100.0	92.3	100.4	98.0	102.4	90.2
Total consumption	93.8	100.0	101.0	105.4	111.2	117.6	120.3
Increment in cash and personal savings	..	100.0	78.4	135.6	254.3	302.6	209.3
Private investment in housing	..	100.0	118.9	98.5	99.5	94.9	109.9
Financial expenditures	..	100.0	103.8	117.7	121.8	123.7	126.6
Total (after tax) income of population [b]	..	100.0	102.1	107.8	116.6	123.9	124.3

Sources: A nemzeti jövedelem és a lakosság jövedelme, 1963, 1964 and 1965.

[a] Including the material part of services.

[b] Including the effect of changes in private investment in agriculture, which w negative in 1960-1962.

investment, which was (decreasingly) negative in the years of rapid collectivization (1960-1962).

Evidently, the conclusions emerging from the Hungarian figures cannot be generalized for the other countries of the region. There are, *a priori*, no grounds for believing that time trends in the income categories responsible for the difference between material consumption and total income followed any systematic pattern in other countries over the period under review. Indeed, all available evidence points to the contrary. It was shown in the preceding sections that expenditure on non-productive services everywhere tended to expand faster than individual material consumption, but there was little uniformity and a great deal of inter-country variation. On the other hand, recent Hungarian experience of a declining importance of the adjustment of the valuation of self-consumption has probably been rather general, both because of a declining share of self-consumption in total income,[55] and because the gap between the producers' and consumers' prices of agricultural produce has been narrowing. But the movements of savings and of private investment have been quite irregular. The data assembled for three countries in Chart 7.5 show that over the years 1956-1965 the wage cost of main non-material services tended to rise faster than material consumption. A rising long-term trend, superimposed on rather sharp year-to-year fluctuations, seems also discernible for personal savings. On the other hand, investment in private housing rose sharply in the Soviet Union and in Poland until around 1960, but declined to its mid-1950s level in the former country and remained about stationary in Poland during the early 1960s. In Czechoslovakia, both the rise and the fall were muc milder.

For some countries and for some periods, trend recorded by the index of "real incomes of population can be compared with changes in personal materia consumption:

Index numbers, base year = 100

Country	*Period*	*Individual material consumption per capita*	*Per capita real income of population*
Bulgaria	1952-1960	178.1	179.0
	1960-1964	123.0	117.8
	1952-1964	*219.1*	*210.6*
Czechoslovakia	1948-1955	138.5	147.1
	1955-1964	139.5	137.1
	1948-1964	*193.3*	*201.6*
Eastern Germany	1955-1962	151.1	158

Sources: National statistics.

In Czechoslovakia and eastern Germany the index c real incomes includes both the non-material part c services and the net increment in savings, and it seems tha these categories were expanding somewhat faster tha individual material consumption over the periods ind cated.[56] In Bulgaria (as in the Soviet Union, for whic no comparison can be made in the absence of data o material consumption at constant prices), the wag element of non-productive services is not included in th index of real incomes which — at least until 196 — followed closely the development of material cor sumption. Indices of real incomes of the population ar

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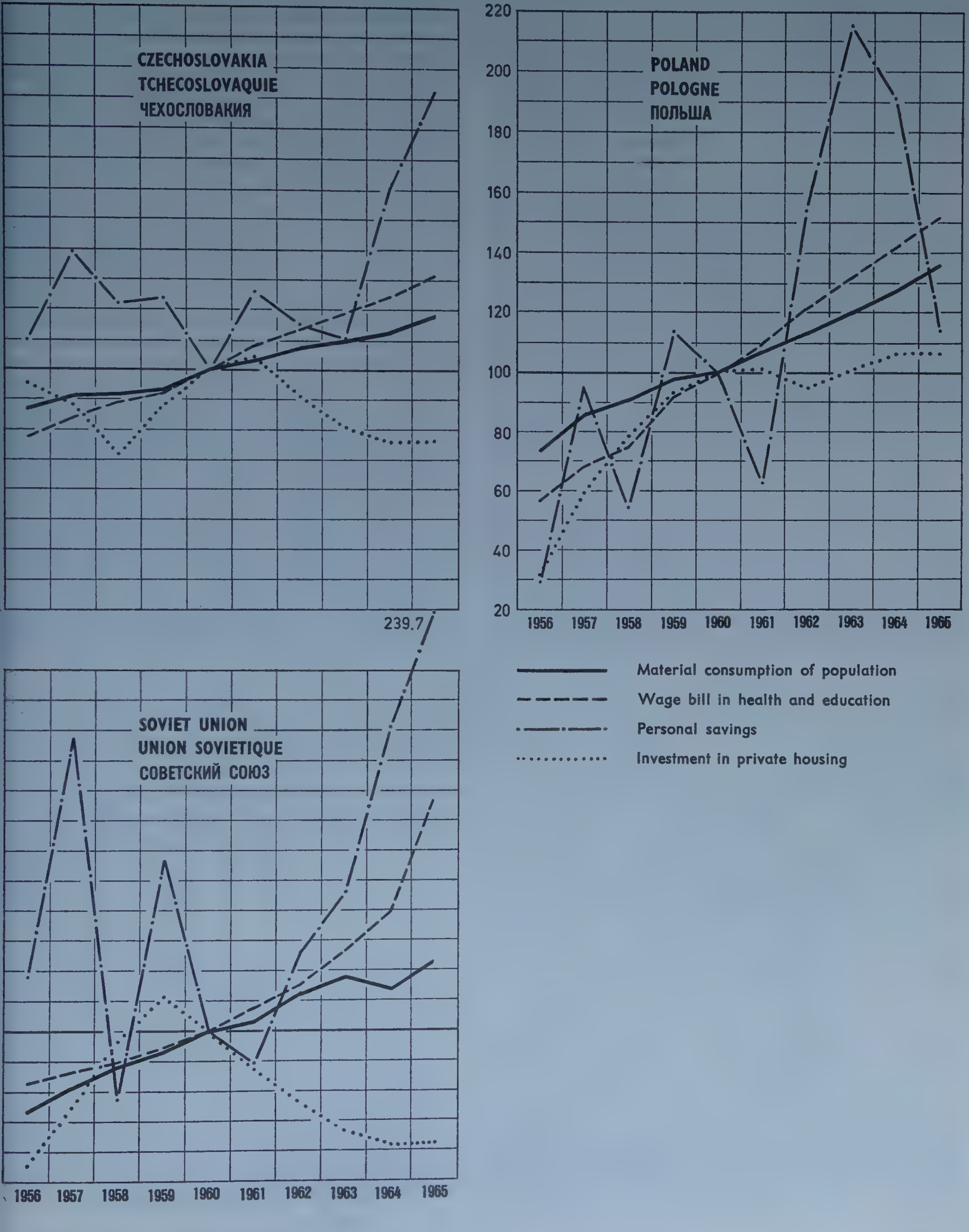
[55] In Czechoslovakia, for instance, the share of in-kind consumption went down from 10.0 per cent of total incomes in 1955 to 5.4 per cent in 1963 (*Statistika*, No. 8, 1965, p. 341); and in eastern Germany this share — calculated in relation to total consumption — declined from 8.5 per cent in 1955 to 3.7 per cent in 1962 (*Wirtschaftwissenschaft*, No. 1, 1964). See also section 7.5 below.

[56] In Czechoslovakia, the share of the total value of unpai services declined from 15.7 per cent of total income in 1955 to 14.3 p cent in 1960, but rose again to 15.9 per cent in 1963. In easter Germany, this share — calculated in relation to total consumption - rose from 14.4 per cent in 1955 to 17.5 per cent in 1962. (*Statistik* No. 8, 1965, and *Wirtschaftwissenschaft*, No. 1, 1964.)

CHART 7.5

Trends in material consumption and in selected indicators (current prices)

Index numbers, 1960 = 100



not calculated in Poland nor in Rumania. In the former country, the estimates made by L. Zienkowski for the period 1955-1960 yielded the following results (per capita data at constant prices):

	Index numbers, 1955 = 100
Material consumption	125-126
Non-material services	180-181
Increment in financial assets	307
Private investment	155-156
Real incomes of population	130-133

Op. cit., pp. 265 and 269.

It can be seen that over the 1956-1960 quinquennium the main components of total incomes outside material consumption rose much faster than the latter.

Thus, in spite of the rather marginal nature of both services and non-consumption expenditures, the available evidence supports the conclusion that short-term discrepancies between the dynamics of material consumption and total income can be of some importance, and that in the long run the latter aggregate has tended to grow faster than the former.

The composition of the total income of population according to source

One consequence of the gradual socialization of the economic system of eastern European countries after the war (the same process as had taken place in the Soviet Union throughout the inter-war period) has been the virtual disappearance of profit as a personal income category and a considerable diminution of income from self-employment. The full nationalization of the means of production in industry, construction and transp in the early stages of the plan era eliminated the ma source of private profit from capital; assumption control by the state over the trade network turn self-employed shopkeepers into hired workers; a although private ownership of housing has persisted a has even been lately encouraged, renting for profit been severely restricted and discouraged. In agricultu however, the co-operative forms of ownership have existed with some private ownership of land, wh certain elements of self-employment and profit-maki have survived. In industry and construction a sm proportion of enterprise profit is usually distribut among the personnel in the form of individual awar and collective benefits, but such sources of prem generation have little in common with the notion profit on capital as understood in market economi and interest on personal savings, though growing importance as living standards rise, is still of negligi proportions in the majority of the countries of the ar

On the other hand, one of the principles of the inco policy followed consistently in all planned economies been reliance on social security schemes, social benef and free state-provided services such as health a education, as means of improving living standar The benefits, in cash and in kind, accruing to the popu tions from such services have come to represent a su stantial share of their total incomes, as Table 7.7 indicat Nevertheless, the lion's share — some 70-80 per cent — total incomes (taken in the widest sense) derives eve where from income from work. Within the latter catego the main distinction is between income from employme and income from agricultural activity (outside the sta farms), but this breakdown is largely a function of t structure of employment. In the two highly industrializ countries of the area — Czechoslovakia and easte

TABLE 7.7

Composition of the total income of the population

Percentages

Source of income	Bulgaria (1962)	Czechoslovakia (1963)	Eastern Germany (1960)	Hungary (1963)	Poland (1964)	Soviet Union (1960)
Total income of population	*100**	*100*	*100* [a]	*100*	*100**	*100*
Total income from work	*81*	ca *70*	*71*	*75*	*79*	*77**
of which:						
Employment	45	..	..	49	53	54*
Agricultural activity [b]	33 [c]	..	..	22	21	21*
of which: in kind	..	5	4	14	10	..
Private (industrial or commercial) activity, and other sources	..	..	..	5	5	2*
Social welfare fund	*19**	ca *30*	*29*	*23*	*18*	*23**
of which:						
Social benefits	9*	14	14	8	7	..
Transfers in kind	10*	16	15	15	11 [d]	..
Other income	..	..	..	..	3	..

Sources: National statistics, *Dvadeset godini sotsialistchesko stroitelstvo v tsifri*, Sofia 1964; Professor Donda, *op. cit*;. *Wirtschaftwissenschaft*, No. 1, 1964; *A nemzeti jövedelem és a lakosság jövedelme*, 1963; *Statistika*, No. 8, 1965; direct communications from the Central Statistical Offices of Bulgaria and Poland.

[a] Excluding private investment.
[b] Excluding wages paid on state farms which are included in income from employm
[c] Primary income in agriculture.
[d] Current budgetary expenditure on health, education and culture

rmany — on-farm consumption of agricultural produce resented in the early 1960s about 5 per cent of total omes, but it was much higher in Hungary and Poland, ere it accounted for 10-15 per cent of the total, and no ubt higher still in Bulgaria and the Soviet Union. e share of income from the social welfare fund is wn to have varied between an estimated 18 per cent Poland and nearly 30 per cent in eastern Germany and choslovakia; and within this category the value of vices rendered freely by the state to the population rywhere exceeded that of social cash benefits, in some ntries — Hungary and Poland — quite considerably. vill be remembered, however, that the data in Table 7.7 partly estimated and at best show only orders of gnitude.

Another breakdown of total income, of particular portance to planners, is that between income in cash l in kind. The latter, which is composed largely of the ue of agricultural self-consumption and of unpaid vices, provided some 20-30 per cent of total income. account of the declining incidence of self-consumption l the continuous process of monetization of peasant ome there has generally been a tendency for the share money incomes to increase over time.

Regular series of data on money incomes and expenures of the population (at current prices) are collected rywhere as a basic statistic of operational planning, l an account of their relevance for balancing supply l demand is given in Chapter 10. On the other hand, istics on trends at constant prices in the structure of total income of population are generally not available a gap in information that can be attributed to several sons. First, the relative shares of the various sources ncome are a straightforward function of employment ıcture. Second, changes in the weight of the social fare fund are only partly due to policy changes; they ult, to a large extent, from demographic trends such the ageing of population leading to a sharp increase in number of old-age pensioners, or a decline in fertility l family size. Third, the distinction between "employnt" and "agricultural activity" does not quite coincide h that between the incomes of, respectively, wageners and peasants;[57] and social benefits are shared both these categories. For social, political and econo- reasons, attention usually centres more on income nds and differentials in these two main socio-economic ups than on changes in the main components of total omes.

Urban/rural income differentials and their impact on the growth of total incomes

Postwar trends, and their underlying factors, in the incomes of wage-earners and of peasants are examined in some detail in the two following sections. By way of introducing the subject, an attempt is made in the present section to throw some light on the relative changes in the incomes of these two population groups that occurred during the period under study, and to assess the impact of the changing structure of population and of employment, as between the farm and the non-farm sectors, on the rate of growth of the total income of population.[58]

Low labour productivity, itself a function of primitive techniques of cultivation — often in conjunction with overcrowding of cultivable land — has usually been held responsible for the traditionally low levels of income of the east European peasantry in the past. As was remarked in the introductory pages of this chapter, the relative position of the peasantry improved somewhat in most countries during and immediately after the war, owing partly to the losses in standards of the urban masses but also to some closing of the "price-scissors" of industrial and agricultural goods, and, somewhat later, to the effects of land reforms which improved the situation of the poorest sections of the rural population. Nevertheless, in the early 1950s living standards in the countryside were still lagging behind — in most countries quite considerably — urban standards.

The data on trends in wage-earners and peasant incomes assembled in Table 7.8 (see also Appendix Table 7.VI) do not provide an adequate basis for drawing clear-cut conclusions on the distribution of the total income of population between these two socio-economic categories during the period under review. Only the data for Bulgaria (since 1952), Czechoslovakia (since 1955), and Hungary are at all comparable for the two groups, in so far as they all refer to per capita total income in each case. It is clear that wage-earners were faring better than peasants in Bulgaria between 1952 and 1955, but the trend was reversed in the second quinquennium and, more markedly, in the 1960s. In Czechoslovakia, too, peasant incomes have been growing faster than those of wage-earners since 1955. In Hungary, wage-earners gained relatively more in the consumption phase, otherwise peasants' consumption income grew faster. The Polish data on peasant incomes in Table 7.8 refer to incomes from agricultural activity only. According to the *Economic Bulletin for Europe*, Vol. 9, No. 3, p. 34, "at least up to 1956 the distribution of per capita income almost certainly changed in favour of the agricultural population". L. Zienkowski's estimates for 1956-1960

In 1963, about 20 per cent of Hungarian households derived r income from both employment and agricultural activities. re than 7 per cent of the total income from employment was erated in peasant households (amounting to 13 per cent of total sant incomes), whereas 21 per cent of income from agricultural vity accrued to wage-earners (amounting to about 7 per cent of l income of wage-earners); and three-fourths of the welfare fund efited the wage-earners' families. According to the 1960 popula- census of Poland, of the 6.6 million people gainfully occupied in culture, around 400 thousand had incomes also from other vities; and of the 7.4 million classified as deriving their main ome from non-agricultural occupations, around 700 thousand also income from agricultural production. Altogether, about 2.5 mil- people — out of a population of 30 million — had both agriural and non-agricultural incomes.

[58] Trends in total incomes must also have been influenced by structural changes in employment status other than those described here. In the transitional period, before the attainment of a high degree of socialization of the means of production and of the distributive network, changes in the socio-economic composition of the population undoubtedly tended to lower the size of the total income of population. In the later periods, demographic evolution everywhere led to an increase in the proportion of old people, and consequently of pensioners, in the population. In some countries, eastern Germany for instance, this factor must also have depressed to some extent the growth rate of total income.

TABLE 7.8

Trends in real incomes of wage-earners and of peasants

Percentage changes per capita over the period

Country and indicator	1951-1955	1956-1960	1961-1965	1951-1965
Bulgaria				
Real incomes of wage-earners	38 [a]	39 [b]	12	115 [d]
Real incomes of peasants	11 [a]	54 [b]	42	142 [d]
Czechoslovakia				
Real incomes of wage-earners	. .	24	8 [c]	. .
Real incomes of peasants	. .	30	11 [c]	. .
Hungary				
Real incomes of wage-earners	5	42	18	98
Real consumption income of peasants	15	13	25	63
Poland				
Real wages (per wage-earner)	24	30	8	74
Real consumption income of peasants [e]	. .	28	12	. .
Rumania				
Real wages (per wage-earner)	25	48	22	126
Real incomes of peasants	69	9*	. .	. .
Soviet Union				
Real wages of wage-earners (per wage earner) . . .	39	15	15	83
Real incomes of peasants (per working peasant) .	49	26	42	167

Sources: See Appendix Table 7.VI.

[a] 1953-1955.

[b] 1957-1960.

[c] 1961-1964.

[d] 1953-1965.

[e] Incomes from agricultural activity only.

put the growth of per capita real incomes of the non-agricultural population at 31-33 per cent, compared with an increment of 27-29 per cent for the agricultural population.[59] In 1961-1965 per capita real incomes of wage-earners rose by some 17-18 per cent and per capita real incomes of peasants (from agricultural activities) by 11-12 per cent.[60]

In the Soviet Union, the rate of expansion of farmers' incomes was a little faster than that of incomes of wage-earners throughout the period under review, and the margin of difference was continuously widening unt during the 1961-1965 quinquennium, farmers' incom were increasing nearly three times faster than avera wages. The gap would, however, be smaller had t comparison been made on a per capita or, to a less extent, on a per consumption unit, rather than on a p worker, basis, since the number of wage-earners w increasing much faster than the population dependent income from employment, whereas the activity rate co-operative agriculture was probably declining som what (see also the commentary on the text-table on p. below).

Long-term targets for the growth of peasant incon have seldom been announced. The data in Table 7 show that since the mid-1950s the rates of expansion peasant incomes written into the long-term plans Czechoslovakia, Hungary, Poland, Rumania and t Soviet Union were on the whole of the same order magnitude as those for wages. No clear idea of the degr of fulfilment of these plans is obtainable for the la 1950s, but in the first half of the 1960s the plan targets f peasant incomes came closer to fulfilment everywhe except in Rumania.

However, in interpreting the meaning of the relati trends in wage-earners' and peasants' incomes it has be borne in mind that these categories do not rela to "fixed" population groups. Many of the peasan of the early 1950s had emigrated to towns or moved paid employment on state farms, usually at a higher lev of remuneration. The mass movement of peasantry the towns, particularly marked in the overwhelming agricultural populations of eastern Europe, did mu to improve the lot of the peasants, and by the same tok raised the overall levels of incomes of the population a whole throughout the period under study.

Comparisons of income levels of wage-earners wi those of farmers are notoriously difficult; and the dif culties are compounded in the conditions of the central planned economies, where peasants' incomes derive fro a variety of sources (including an important contributi of subsistence farming) and from various modes marketing agricultural produce, each of which has its ov price characteristics (see section 7.5 below). Moreove in comparing living standards in the countryside and the towns, per capita or per "consumption unit" co bined family incomes rather than incomes of fami heads should be considered. Given the importance private plots of land — even in the countries where t collectivization process has been completed — the co tribution of otherwise unemployable "unpaid fami members" to the total family income is usually lar enough to influence the farmer's choice of employme This is one reason why the incentive to leave agricultu has been much more pronounced among single you men and women than among fathers of families, a this also made it possible to maintain the necessa resources of manpower in agriculture in spite of t attraction of higher earnings (per worker) in town.[61]

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[59] *Op. cit.*, p. 264.

[60] S. Michalski, *Wiadomosci Banku Polskiego*, No. 7, 1966, p. 260.

[61] One negative by-product, however, has been a marked det ioration in the quality of agricultural labour, observed everywh

TABLE 7.9

Average real wages (per wage-earner) and real incomes of peasants, long-term plan targets and results

Percentages

Country and plan period	Real wages per wage-earner				Real incomes of peasants			
	Plan (Change over period)	*Actual* (Change over period)	*Plan* (Cumulative annual rate)	*Actual* (Cumulative annual rate)	*Plan* (Change over period)	*Actual* (Change over period)	*Plan* (Cumulative annual rate)	*Actual* (Cumulative annual rate)
Czechoslovakia								
1956-1960	30	25	5.4	4.6	23	2	4.2	0.4
1961-1965	25	6	4.6	1.2	..	..	..	..
Eastern Germany								
1951-1955	16.5 [a]	37.5 [a]	3.1 [a]	6.5 [a]	..	..	..	..
1956-1960	30	43	5.4	7.4	..	..	..	..
1959-1965	60-65	31	6.9-7.4	3.9	..	..	..	..
Hungary								
1950-1954	..	2.3	..	0.4	..	11 [b]	..	2.1 [b]
1956-1960	25	47	4.6	8.0	25	29 [b]	4.6	5.2 [b]
1958-1960	7	12 [c]	2.3	3.9 [c]	4	18 [b]	1.3	5.7 [b]
1961-1965	16-17 [d]	18.5 [d]	3.0-3.2 [d]	3.4 [d]	16 [e]	26 [e]	3.0 [e]	4.7 [e]
Poland								
1950-1955	40	23*	5.8	3.5*	..	..	..	..
1956-1960	30	28	5.4	5.1	30	27	5.4	4.9
1961-1965	23	8	4.2	1.6	23	12	4.2	2.3
Rumania								
1956-1960	30	48	5.4	8.2	..	..	..	..
1960-1965	40-45	35	5.8-6.4	5.1	40	..	5.8	..
Soviet Union								
1951-1955	35	39	6.2	6.8	..	50	..	8.5
1956-1960	30 [f]	23 [f]	5.4 [f]	4.2 [f]	40	26	7.0	4.7
1959-1965	33-35 [g]	23	4.2-4.4 [g]	3.0	40	49 *	4.9	5.9

Sources : National statistics and plans; *Zycie gospodarcze*, No. 2, 1965; *Wiado-*
cl Statystyczne, No. 1, 1956.

n nominal terms. Average real wage rose by 125 per cent over 1951-1955 period.

ersonally disposable consumption.

ncluding profit participation.

[d] Per capita real personal income of wage-earners.

[e] Per capita real personal income of peasants.

[f] Real incomes of wage-earners.

[g] Real incomes of wage-earners (per wage-earner) were planned to increase by 40 per cent over the seven-year period and rose by about 22 per cent.

On account of the scarcity of data on peasant incomes
absolute terms, the approximate nature of estimates
ade in various countries, and the differences in defini-
ons of peasant income between countries, it is not
ssible to measure, with any degree of precision and
mparability, the contribution that structural changes
the population have made during the postwar period
the rate of growth of the total income of population.
n the other hand, there is enough statistical evidence to
pport the hypothesis that this factor was by no means
gligible and was in some countries even of considerable
ight.

It seems that in the mid-1950s the per capita peasant incomes amounted to about two-thirds of per capital wage-earners' incomes in Bulgaria, to about three-fourths in Hungary and Poland, and to more than four-fifths in Czechoslovakia,[62] and there is reason to believe that in the Soviet Union this ratio was of an order of magnitude not exceeding that recorded in Bulgaria.[63]

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ring the postwar period. In the Soviet Union, where the process
ted longer and was quickened by the impact of the war, the
rcentage of men and women above the working ages of 60 and 55
pectively is now twice as high as outside agriculture. I. Pisarev,
etodologicheskie voprosy izucheniya urovnya zhyzni trudiashchy-
sia, Moscow 1962.

[62] The sources for this statement are respectively: *Rabotnichesko Delo*, 12 July 1965 (special supplement); *A nemzeti jövedelem és a lakosság életkorülményei a 3 éres terv idöszakában*, p. 70; K. Sokolowski in *Studia ekonomiczne*, No. 9, 1963; and *Statistika*, Nos. 4 and 8, 1965.

[63] According to V. Mayer (*Zarabotnaya plata v period perekhoda k komunizmu*, Moscow 1963, p. 245), the average per capita revenue of collective farmers from the collective (i.e. excluding the income from private plots) was in 1958 2.3 times lower (i.e. amounted to about 44 per cent) than the average earnings of manual workers on state farms. In the same year the latter amounted to about two-thirds of the average earnings of all wage-earners in national economy (*Narodnoe khozyaistvo v 1964 godu*, p. 555).

At the same time, as is seen from Table 7.3 above, most countries of the area experienced sweeping changes in the population structure over the 15 years under review. Thus, in Bulgaria and Rumania the share of the rural population in the total declined from about three-fourths to less than two-thirds, in Hungary and Poland from more than 60 per cent to somewhat more than 50 per cent, and in the Soviet Union from more than 60 per cent to about 45 per cent. The changes were quite small in the two most urbanized countries of the area — eastern Germany and Czechoslovakia — but in both these countries the weight of agricultural employment declined quite substantially (see columns 3 and 4 of Table 7.3).

Given the approximate nature of available data, the combined effect of the rural/urban income differential and of the structural change can perhaps be tested better by means of simplified hypothetical examples as shown below. For Case I the ratio of farm to non-farm per capita income is 60 per cent and the share of rural population drops over a given period of time from 75 to 60 per cent; in Case II the income ratio amounts to 75 per cent and the weight of the rural population declines from two-thirds to one-half:

	Base year		*Final year*	
	Population structure	*Income ratio*	*Population structure*	*Income ratio*
Case I				
Rural population	75	60	60	60
Urban population	25	100	40	100
Total population	100	70	100	76

	Base year		*Final year*	
	Population structure	*Income ratio*	*Population structure*	*Income ratio*
Case II				
Rural population	65	75	50	75
Urban population	35	100	50	100
Total population	100	84	100	88

It can be seen that in the first case the change in population structure pushes up the average (per capita income of the population by some 10 per cent, wherea in the second case it is responsible for an increase c about 5 per cent. In broad terms, Case I may be taken t represent the actual developments in Bulgaria, an probably also in the Soviet Union and in Rumania whereas Case II reflects the situation in Poland and i Hungary. An alternative exercise in terms of averag income per working person would tend to show differen results, because the growth rate of non-farm employmen may differ from that of the urban population and becaus the activity rates in the urban and rural population may not be the same in the base year. The first of thes factors will affect the weights and the second th differential. In the case of Bulgaria, where both factor work in the same direction, the alternative exercise give 45 percent as a rough estimate of the effect of structura changes in employment on average income per workin person.

7.4. TRENDS AND FACTORS IN THE GROWTH OF WAGE-EARNERS' INCOMES [64]

The present and the following sections examine the factors behind the growth of incomes of wage-earners and, in turn, of peasants. A brief description of the composition of the total income of wage-earners is followed by the exposition of an analytical model which can be used as a framework for the discussion of the main factors contributing to the growth of incomes. The close interrelationships among these factors, and their dependence on policy decisions other than those related to income policy *sensu stricto*, make it necessary to develop parts of the analysis on a country-by-country basis.

The composition of wage-earners' incomes

A characteristic of the income structure of wage-earners in the centrally planned economies has been the large share accruing from the social welfare fund, which — as was shown above — usually consists of social benefits and of the value of services provided free to the population by the state. In Hungary and Czechoslovakia, the two countries for which comprehensive data on total wage-earners' incomes are available for recent years, the social welfare fund was responsible for about one-fourth of total incomes in the early 1960s (see Table 7.10); an in each country about one-third of this source of incom consisted of social benefits in cash and about two-third of the value of transfers in kind. According to the Rumanian estimates for 1962, the share of the welfare fun slightly exceeded one-fourth, but the weight of socia benefits was somewhat greater than that of unpai services. The share of incomes from the social fund wa somewhat lower in the Soviet Union, judging by estimate made for 1955 by Aganbegian and Mayer,[65] and i Bulgaria (in 1963). These estimates seem, howeve to leave out the non-material part of transfers in kind the inclusion of which would have probably raised th contribution of the social welfare fund to about the leve observed in Hungary and in Czechoslovakia. In fact according to the official Soviet 1964 data, the averag incomes of workers and employees, inclusive of payment and benefits from the social fund, exceeded in that yea the average earnings from work by 34 per cent, so tha the share of the latter amounted to almost exactly one fourth of the total.

Another feature of the composition of the tota incomes of wage-earners is the proportion derived fron agricultural activities. Although declining in importanc as living standards rise, the privately cultivated plot c

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[64] Unless otherwise stated, the term "wage-earner" covers in this chapter both wage- and salary-earners, or the category sometimes referred to also as "workers and employees".

[65] *Op. cit.*

TABLE 7.10

Composition of total incomes of wage-earners

Percentages

Source of income	Bulgaria (1963)	Czechoslovakia [a] (1963)	Hungary (1963)	Rumania (1962)	Soviet Union (1955)
Total income of wage-earners	*100.0*	*100.0*	*100.0*	*100.0*	*100.0* [b]
Total income from work	80	76*	74.3	73.2	83
of which:					
Wages and wage-like payments	69	64*	64.9	70.9	78
Agricultural activity [c]	4	4	6.6	2.3	5
Other	7	8*	2.8	..	..
Social welfare fund	14	24*	25.7	26.8	17
of which :					
Social benefits	10	7*	9.5	15.7	8
Transfers in kind	4	17	16.2	11.1	9
Other	6	..	..	..	..

Sources : National statistics; *Statistika*, No. 8, 1965; *A nemzeti jövedelem és a osság jövedelme*, 1963; A. G. Aganbegian and V. F. Mayer, *Zarabotnaya plata SSR*, Moscow 1959; S. Taigar, *op. cit.*; direct communication from the Central istical Office of Bulgaria.

[a] Workers only.

[b] Excluding non-material part of services.

[c] Excluding wages on state farms.

nd or small-scale livestock breeding have remained pular activities.

Statistics on money incomes of wage-earners are mewhat richer than those on total incomes — even if t comparable between countries. Some of them, sembled in Table 7.11, show that wages and wage-like yments (which in some countries include also sickness nefits) have accounted for 80-90 per cent of the total oney incomes of workers and employees. The importance other sources of incomes in cash has varied, however, tween countries and over time: family allowances, for stance, have until recently been of relatively small portance in the Soviet Union and in Hungary compared th Poland and Czechoslovakia; old-age pensions, on e other hand, have been the most dynamic element of cial payments everywhere.

It needs to be borne in mind that some non-wage payments and benefits are more closely linked to past or present employment than others. In particular, most pensions and sickness benefits are conditional on — and vary in size with — the length of employment, years of service within one enterprise, and the personal wage level. That part of money incomes of wage-earners which is not related to the employment status of family members is negligible everywhere. However, most of the benefits in kind flowing from state activities — in health and education for instance — which enter the total income aggregate are largely independent of the employment status.

Finally, a further breakdown of the "wages and wage-like payments" category into earnings based on basic wages and those derived from the various kinds of

TABLE 7.11

Composition of money incomes of wage-earners

Percentages

Source of income	Bulgaria		Czechoslovakia [a]		Eastern Germany	Poland		Hungary		Soviet Union
	1955	1964	1957	1963	1959	1955	1963	1958	1963	1958
tal money income	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0* [b]	*100.0* [b]	*100.0*	*100.0*	*100.0*
Wages and wage-like payments	75.3	74.5	82.5	80.6	91.4	79.8 [b]	80.4 [b]	84.0	84.2	92.3
Sickness benefits	1.3	1.0				1.3	1.3	1.3	1.4	
Pensions	1.0	6.7	1.7	2.0	3.2	2.8	6.1	2.6	3.0	5.4
Family allowances	1.1	2.6	6.7	5.6	2.2	5.0	3.6	1.5	1.8	..
Scholarships, etc.	0.3	0.3	2.4	1.8	0.4	1.0	0.5			0.6
Other	18.0	14.9	6.7	9.9	0.6	10.1	8.1	10.6	9.6	1.7

Sources : Statistical yearbooks; *Vestnik statistiki*, No.9, 1960; *Statistika*, No.8, 5; *A nemzeti jövedelem és a lakosság jövedelme* 1963; direct communication from Central Statistical Office of Bulgaria.

[a] Workers only.

[b] After-tax income.

premia, bonuses, etc. is of considerable interest to planners and largely reflects the type of incentive system in force. Such a breakdown is discussed in Chapter 8.

A framework for the analysis of factors in income growth

Four basic stages of the analysis of the growth of wage-earners' incomes are distinguished, resulting in a summary equation with which the contribution of the main variables to the increments of income observed over various periods of time are assessed.

First, changes over time in the total nominal wage-fund, taken as a function of average nominal wages and of employment, are considered:

$$Wn = \frac{Wn}{E} \times E \qquad (1)$$

where Wn denotes the nominal wage-fund and E employment of wage-earners. As a rule changes in average nominal wages can result from:

(*a*) the revision of basic wage-rates;

(*b*) changes in piece-work norms and in the premium system;

(*c*) changes in the skill structure of employment; and

(*d*) changes in less controllable factors causing a wage drift.

It is not possible to obtain a fully comprehensive picture of the effect of all these factors for the whole period for any country, but indications will be given regarding the timing and the significance of wage settlements, regulations and reforms in the various countries during the period under review.[66]

The second stage represents a shift from the average nominal to the average real wage:

$$\frac{Wr}{E} = \frac{Wn}{E.C} \qquad (2)$$

where Wr stands for the total real wage-fund and C for the cost of living. This stage calls for a discussion of policies pursued with regard to consumer prices.

In conditions of rapidly changing employment and economic activity rates, trends in wages per wage-earner do not fully reflect the impact of wage improvements on the living standard of the population dependent on wage-earners. Accordingly, the third stage deals with changes in per capita real wages as a function of real wages per wage-earner and of the activity ratio:

$$\frac{Wr}{P} = \frac{Wr}{E} \times \frac{E}{P} \qquad (3)$$

where P stands for the total of wage-earners and their dependants.

It was observed earlier that in the centrally planned economies of eastern Europe, a large part — about one-fourth in the early 1960s — of the total incomes of wage-earners derives from sources other than earnings from work. The last stage of the analysis therefore introduc another variable, the ratio of total incomes from sources to earnings from employment:

$$\frac{I}{P} = \frac{Wr}{E} \times \frac{E}{P} \times \frac{I}{Wr} \qquad ($$

where I represents total incomes from all sources (real terms). Thus equation (4) breaks down the incr ments in per capita total real incomes into three co stituents: the average real wage per wage-earner; t activity ratio; and the incidence of non-wage income

Lack of the required statistical data does not perm the application of the above simplified analytical mod in all its stages. Its application, particularly with regard the last stage, has therefore had to be restricted to som countries and/or to some periods of time.

(i) *Trends in average nominal and real wages*

In nominal terms, the total wage-bill of workers an employees rose over the 15 years under study by multipl ranging from less than 3 times in eastern Germany an Czechoslovakia to more than 6 times in Rumania (s Tables 7.12 and 7.13 and Chart 7.6). Everywhere th swift expansion was to a large extent due to rapid increas in employment, although the contribution of this fact varied greatly between countries and over time. Over th period as a whole, increased employment opportuniti were responsible for nearly two-thirds of the growth the wage fund in the Soviet Union and Bulgaria, for abou one-half in Czechoslovakia, and for about one-third all other countries except eastern Germany (where amounted to only one-fourth). In most countries risin employment played a particularly important role in th growth during the early 1950s and in the 1960s. In th earlier period the large influx of rural emigrants in number of countries was mainly responsible, whereas the 1960s demographic factors became more significa — particularly in Poland and, later, in the Soviet Unio — through the arrival on the labour market of th increased postwar birth cohorts. In both these perio increases in urban activity rates were important almo everywhere.[67]

No firm generalization can be made regarding tren in consumer prices. True, a common feature of the ear development in most countries was inflationary pri rises following the headlong industrialization of the ear 1950s; but during the same period two countries, th Soviet Union and eastern Germany, followed a polic of price reduction for consumers' goods. More hom geneous tendencies can be detected during the middle an late 1950s, when consumer prices tended first to declin and then to stabilize almost everywhere. In Polan however, prices rose continuously throughout the perio and in some other countries (Czechoslovakia, Rumani a gentle upward movement was recorded in the ear 1960s.

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[66] The influence of structural changes in employment will be touched upon in the following chapter which analyses also trends in nominal wages in economic sectors and industrial branches.

[67] It would appear in the light of the 1965 population cens results that the Bulgarian data on urban population and urb activity rates (see Tables 7.12 and 7.14) appreciably understate t rates of growth of these categories in the 1960s. See also foo note 113 below.

TABLE 7.12

Factors of growth of incomes of wage-earners

Index numbers, year preceding beginning of period = 100

Country and period	Wn	E	$\frac{Wn}{E}$	$\frac{Wr}{E}$	P[a]	$\frac{E}{P}$	$\frac{Wr}{P}$	$\frac{I}{P}$[b]	$\frac{I}{Wr}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Bulgaria									
1953-1965	*362.2*	*216.3*	*167.5*	*214.1*	*180.9*	*119.6*	*256.1*	*215.1*	*84.0*
1953-1955	139.7	121.1	115.3	144.3	113.2	107.0	154.4	137.6	89.1
1956-1960	178.9	144.3	124.0	135.0	123.0	117.3	158.4	139.3	87.9
1961-1965	144.9	123.8	117.1	109.9	129.8	95.4	104.8	112.3	107.2
Czechoslovakia									
1951-1965	*234.4*	*149.5*	*156.9*	*144.6**	..	..	..	..	..
1951-1955	147.3	116.3	126.7	109.9*	..	..	..	..	..
1956-1960	128.1	112.7	113.7	124.6	106.8	106.0	132.4	124.3	93.9
1961-1965	124.2	114.0	108.9	104.3[c]	109.3*[a]	101.6[c]	106.0[c]	108.2[c]	102.1[c]
Eastern Germany									
1951-1965	*254.5*	*125.2*	*203.3*	*365.9*	*95.6*	*131.0*	*479.3*	..	..
1951-1955	166.7	120.0	138.9	225.8	97.9	122.6	276.8	..	..
1956-1960	132.7	103.3	128.5	143.3	96.8	106.7	152.9	..	..
1961-1965	115.1	101.0	113.9	113.1	100.8	100.2	113.3	..	..
Hungary									
1951-1965	*468.1*	*169.0*	*277.0*	*167.8*	*125.6*	*134.3*	*223.3*	*198.0*	*88.7*
1951-1955	219.8	132.1	166.4	104.6	111.9	118.1	123.5	118.5	96.0
1956-1960	166.7	112.0	148.8	147.2	103.1	108.6	159.9	141.7	88.6
1961-1965	127.8	114.3	111.8	109.0	108.9	104.7	113.1	117.9	104.2
Poland									
1951-1965	*576.1*	*177.2*	*325.0*	*151.0*	..	..	..	..	..
1951-1955	244.0	131.6	185.4	109.8	..	..	..	..	..
1956-1960	164.4	110.9	148.2	128.6	..	..	..	..	..
1961-1965	143.7	121.4	118.4	106.9	..	..	..	..	..
Rumania									
1951-1965	*633.4*	*205.3*	*308.8*	*226.3*	*155.9**	*131.7*	*298.0*	..	..
1951-1955	204.1	138.9	146.9	125.0	128.7	107.9	134.9	..	..
1956-1960	176.3	110.2	160.0	148.0	111.9	98.5	145.8	..	..
1961-1965	176.1	134.1	131.3	122.3	108.2	123.9	151.5	..	..
Soviet Union									
1951-1965	*295*	*198*	*149*	*187*	*175*	*113*	*211*	*220*	*104*
1951-1955	140	124	113	142	124	100	142	142	100
1956-1958	123	113	109	109	111	102	111	115	104
1959-1965	172	141	122	121	127	111	134	135	101

Sources: National statistics.

nds in urban population; in Czechoslovakia, changes in the number of wage-ners and their dependants.

Hungary, per capita total income excludes the value of transfers in kind; in garia, total income presumably includes only the material cost of such transfers; he Soviet Union the data on total income are obtained from the series which ers to the total of "*Igoty i vyplaty iz obshchestvennogo fonda*" (social welfare d), i.e. includes the total value of transfers in kind.

1-1964.

Key :

Wn = Nominal wage fund

E = Employment

$\frac{Wn}{E}$ = Nominal wage per wage-earner

$\frac{Wr}{E}$ = Real wage per wage-earner

$\frac{I}{P}$ = Total incomes per capita

P = Wage-earners and their dependants

$\frac{E}{P}$ = Activity ratio

$\frac{Wr}{P}$ = Real wages per capita

$\frac{I}{Wr}$ = Ratio of total incomes to wages

ne common feature of consumer price movements hough one that varied in intensity — was the slower of decline, or faster rate of increase (depending on the ction of general trend), of prices of foodstuffs in tion to those of manufactured goods (see Table 7.15). s meant that the general effect of price changes was to en the real income differential between the lower and higher income brackets.

As might be expected, the diversity of forces shaping the growth curve of real wages has resulted in wide inter-country and inter-temporal variations of these rates (see Table 7.13 and Chart 7.7). Over the whole period under study by far the fastest rise in average real wages per wage-earner — of more than 9 per cent a year on a cumulative basis — was achieved in eastern Germany. In Bulgaria (since 1952) and Rumania the rate of increase

TABLE 7.13

Trends in the wage-fund, employment and average real and nominal wages

Index numbers, 1955=100

Country and indicator	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria																
Wage-fund	48.4	57.0	71.6	80.8	92.1	100.0	108.8	120.7	129.4	148.3	178.9	194.6	204.1	223.1	238.7	259.3
Employment	65.5	73.3	82.6	88.3	95.4	100.0	102.7	108.9	115.0	128.4	144.3	149.5	153.1	162.0	169.2	178.6
Average nominal wages	73.9	77.8	86.7	91.5	96.6	100.0	105.9	110.8	112.5	115.5	124.0	130.2	133.3	137.7	141.1	145.2
Real wages	..	..	69.3	77.6	91.4	100.0	114.2	118.5	120.4	125.3	135.0	140.6	139.8	141.4	144.3	148.4
Czechoslovakia																
Wage-fund	67.9	..	81.5	87.0	96.0	100.0	106.7	112.0	116.0	120.7	128.1	136.4	141.3	143.6	150.9	158.6
Employment	86*	..	93*	95.1	98.3	100.0	102.8	105.8	107.3	109.4	112.7	117.0	120.5	122.5	125.2	128.5
Average nominal wages [a]	78.9	84.0	87.6	91.5	97.7	100.0	103.8	105.9	108.1	110.3	113.7	116.6	117.3	117.2	120.5	123.4
Real wages	91*	87*	86*	86.1	95.1	100.0	106.5	110.8	113.3	118.5	124.6	128.5	127.7	126.9	129.9	131.6
Eastern Germany																
Wage-fund [b]	60.0	67.3	74.2	83.1	95.1	100.0	103.3	109.2	116.8	127.0	132.7	139.6	140.7	142.1	146.6	152.7
Employment	83.3	87.1	91.0	95.0	100.7	100.0	100.5	102.5	102.1	103.3	103.3	104.3	104.2	103.7	103.8	104.3
Average nominal wages [a]	72.0	77.3	81.5	87.5	94.4	100.0	102.8	106.5	114.4	122.9	128.5	133.8	135.0	137.0	141.2	146.4
Real wages	44.3	60.2	69.2	78.1	90.7	100.0	103.4	108.8	123.4	135.2	143.3	148.7	149.0	151.4	156.4	162.1
Hungary																
Wage-fund	45.5	54.0	76.6	85.8	96.8	100.0	109.4	130.5	140.8	154.7	166.7	173.2	181.7	195.8	208.6	213
Employment	75.7	84.1	92.6	98.6	99.4	100.0	99.0	97.6	100.9	106.7	112.0	114.9	118.2	122.7	126.8	128
Average nominal wages	60.1	64.2	82.7	87.0	97.4	100.0	110.5	133.7	139.5	145.0	148.9	150.7	153.7	159.6	164.3	166.5
Real wages	95.6	84.6	77.6	82.1	96.5	100.0	111.6	131.8	137.2	144.4	147.2	147.5	149.6	156.3	160.4	160.4
Poland																
Wage-fund	41.0	49.0	55.9	84.4	92.6	100.0	115.6	135.8	143.8	158.1	164.4	177.8	191.5	208.5	219.1	236.2
Employment	76.0	82.7	86.8	92.6	95.8	100.0	104.2	107.3	107.9	110.0	110.9	115.3	120.6	125.6	128.2	134.6
Average nominal wages	54.0	59.2	64.4	91.1	96.7	100.0	110.9	126.6	133.3	143.7	148.2	154.2	158.8	166.0	170.9	175.5
Real wages	91.1	91.2	84.3	84.0	94.8	100.0	111.5	120.5	124.4	130.7	128.6	131.4	131.1	134.0	137.2	137.5
Rumania																
Wage-fund	49.0	..	..	..	..	100.0	112.7	123.3	138.9	152.4	176.3	198.6	224.6	250.8	273.6	310.4
Employment	72.0	82.0	86.4	94.4	96.9	100.0	101.5	98.6	99.9	103.7	110.2	118.2	126.9	133.4	139.6	147.8
Average nominal wages	68	..	..	..	..	100	111	125	139	147	160	168	177	188	196	210
Real wages	80	83*	83*	88*	96*	100	107	121	126	134	148	153	160	168	171	180
Soviet Union																
Wage-fund	71.6	76.5	81.1	84.9	94.8	100.0	105.3	116.3	123	129.5	143.6	159.5	171.7	178.1	191	211
Employment	80.4	84.1	87.2	90.3	97.7	100.0	104.3	109.7	112.8	116.7	128.2	136.3	141.9	146.0	151.6	159
Average nominal wages	89	91	93	94	97	100	101	106	109	111	112	117	121	122	126	133
Real wages	72	79	85	94	99	100	104	109	110	113	115	120	122	123	126	135*

Sources: National statistics; L.S. Blakhman, *Proizvoditelnost i oplata truda v period razvernutovo stroitelstva komunizma*, Lenizdat 1964; A.G. Aganbegian and V.F. Mayer, *Zarabotnaya plata v SSSR*, Moscow 1959; *Wiadomosci Statystyczne*, No. 1, 1956; *Statistika a demografie*, 11, 1961, pp. 99-100 (for cost-of-living index and real wages in Czechoslovakia in 1950-1952); S. Taigar, *Veniturile populatiei si nivelul de trai in RPR*, Bucharest 1964; direct communication from the central statistical office of Bulgaria.

NOTE. — As a rule the "wage-fund" series have been derived from the indices of changes in employment and

to gross money wages (i.e. before tax and other deductions), and for Bulgaria, Hungary and Poland to net wages.

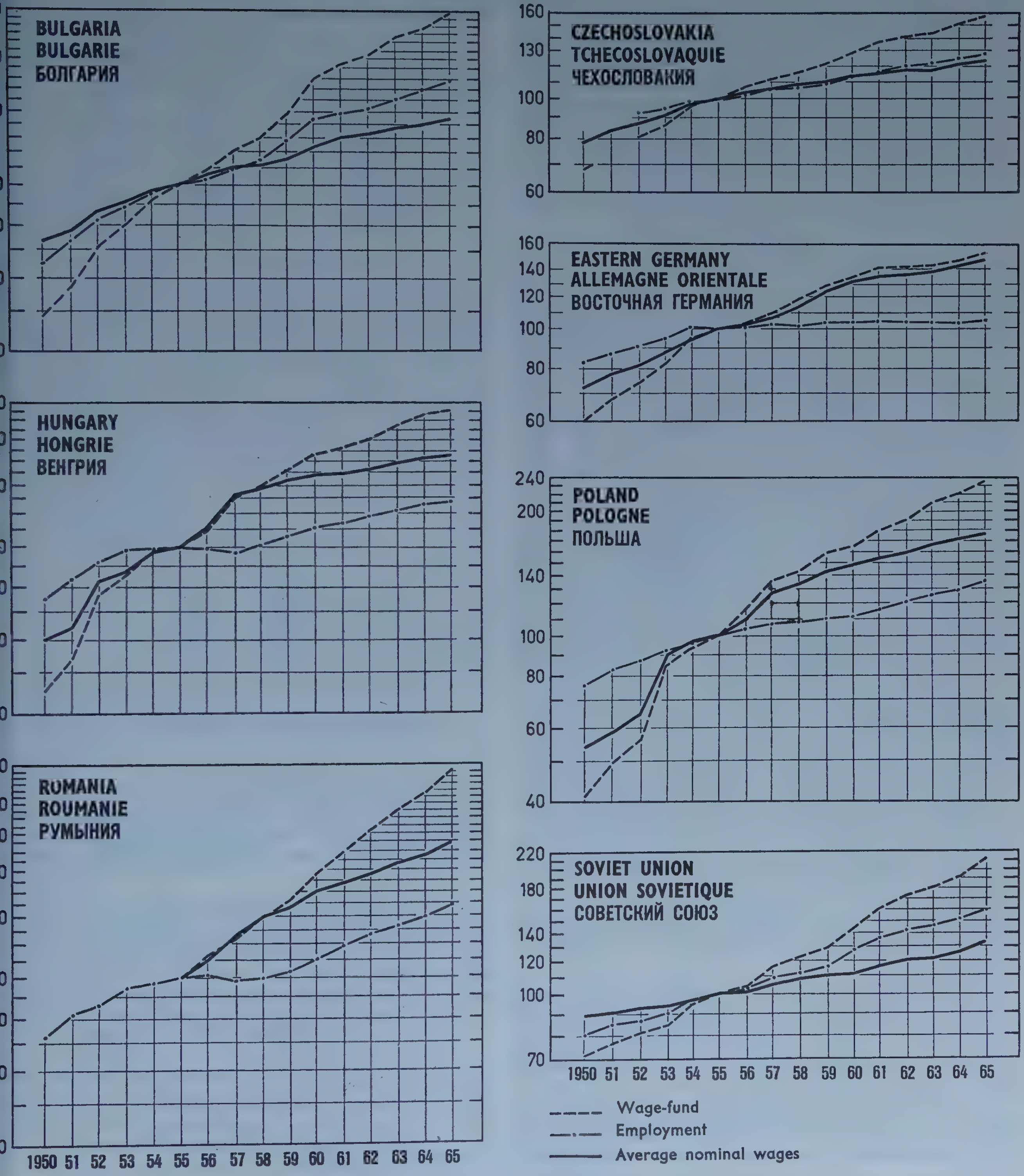
[a] In the socialized sector.

[b] Since the series on employment refers to all wage-earners, whereas that for average nominal wages refers only to those fully employed, the growth rate of the wage-fund has a slight upward bias, particularly in the nineteen-sixties when part-time employment of women and old-age pensioners gained in popularity.

CHART 7.6

Trends in wagef-und, employment and average nominal wages

Index numbers, 1955 = 100



was about 6 per cent and in Hungary and the Soviet Union about 4 per cent. The lowest rates, in the region of less than 3 per cent per annum, were in Poland and Czechoslovakia. However, as will be seen later, these wide differences between countries are considerably narrowed when "per capita" rather than "per wage-earner" trends are considered.

The expansion of real wages per wage-earner was very slow — if indeed there was any at all — in Poland, Hungary, Bulgaria and Czechoslovakia in the early 1950s (in the last two countries until the monetary reforms of 1952 and 1953 respectively). Subsequently, the rates quickened in all these countries until the late 1950s, but they slowed down again in the 1960s. This development was reflected in the degree of fulfilment of the long-term plan targets for real wages, which tended to be met or even (in Hungary and Rumania) exceeded in the 1956-1960 quinquennium, but have remained largely underfulfilled everywhere except in Hungary in the 1960s (see Table 7.9 above).

The Soviet Union

In the 1951-1965 period about two-thirds of the rise in the value of the total wage-bill was the consequence of higher employment in the Soviet Union, only one-third being due to the increase in average nominal wages; and these ratios were almost identical in all the main phases of Soviet postwar development (see Table 7.14). Another characteristic of this development was the rather smooth growth of average nominal wages. In fact, during the first two quinquennia, 1951-1955 and 1956-1960, average nominal wages rose by the same margin of 12 per cent; only in the most recent quinquennium has the pace quickened, resulting in an expansion of 19 per cent. One reason for this regularity was the virtual absence — until the wage reform of 1956 — of any radical revisions of the prevailing basic wage rates. During the period of the Fifth Five-year Plan (1951-1955) the main effects on the trend in nominal wages were due — in addition to the "normal" increases associated with productivity rises — to some wage increases for workers in the light and food industries at the end of 1953, to the increased share of employment in the better paid sectors and branches, and to improved bonuses paid for the duration of employment and for geographical location.[68] However, total earnings were also increasing as a result of an unplanned growth of premia payments obtained for overfulfilment of frequently obsolete work norms; this thwarted the policy of nominal wage stabilization and eventually led to an extensive reform of the wage system.[69]

The slow movement of the nominal wage level was accompanied in the years 1947-1954 by a policy of drastic reductions of consumer prices with the aim of restorin the purchasing power of the rouble to near its pre-wa level.[70] Over this period the state retail trade price inde for all goods fell by 57 per cent and that for foodstuf by 62 per cent. Particularly steep reductions — amountin to about two-thirds of the 1947 price — affected brea meat and butter. On the other hand, price cuts were rathe moderate for such industrial goods as woollen textiles an clothing, the price of which was reduced by amoun ranging from 10 to 20 per cent. As a rule price cuts wer decreed in the spring and their impact was as follows

	Percentage reduction	*Cumulative effect from November 1947*
December 1947 . . .	— 16.6	83
April 1948 *March 1949*	— 14.8	71
March 1950	— 19.8	57
March 1951	— 6.8	53
April 1952	— 5.7	50
April 1953	— 10.8	45
April 1954	— 4.0	43

Source: S. P. Figurnov, *op. cit.*, p. 156.

As borne out by the parallel falls in the prices charged o collective-farm markets, the price cuts decreed f foodstuffs in 1947 and in 1948 reflected the change market conditions due both to the impact of the 194 reform on the purchasing power of the population an to generally improving supplies. However, betwee 1949 and 1952 the price level on collective-farm marke remained stable, and a drop in 1953 by a few percentag points was more than offset by a sharp rise in 1954:

Price level on collective-farm markets

Index, 1940 = 100

1940	100	*1951*	105
1942	372	*1952*	105
1948	134	*1953*	97
1949	103	*1954*	107
1950	104	*1955*	107

Sources: S. P. Figurnov, *op. cit.*, p. 158; *Sovetskaya Torgovlya, Statisticheski Sbornik*, Moscow 1964.

The combined effects of price cuts and of nomin wage increases led to an increase in average real wages nearly 40 per cent during the period of the Fifth Five-ye Plan (1951-1955), thus exceeding the planned increme

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[68] S. P. Figurnov, *Realnaya zarabotnaya plata i podem materialnogo blagosostoyanya trudyashchykhsia SSSR*, Moscow 1960, p. 140. During this period the average value of bonuses for length of service rose by 32 per cent for industrial workers and by 37 per cent for technicians; and the payments for annual leave (per industrial worker) increased by 20 per cent (*ibid.*).

[69] The harm done by the wage-drift lay perhaps not so much in its effect on the overall level of nominal wages as in the fact that it affected some branches and some categories of workers more than others, thus distorting the established differentials (see Chapter 8).

[70] This was in marked contrast with pre-war policies, wh expansion of real incomes occurred in conditions of rapidly risi prices. During the 1928-1940 period, the value of trade in the sta and co-operative network rose 6.38 times faster than its volu (*Sovetskaya Torgovlya, Statisticheski Sbornik*, Moscow 196 and the trend continued until the 1947 monetary reform, the sta retail trade price index increasing 3¼ times between 1940 and 19 and that of the collective-farm markets by 3¾ times.

[71] Over the 1947-1954 period as a whole, prices fell more heav on the free market than in the state shops (by 71 per cent agai 57 per cent respectively) and the gap in relative price levels narrow although according to Figurnov it still remained excessive. Accordi to some western observers, the gap amounted to about 35 per c in 1954. (See J. Chapman, *Real wages in Soviet Russia since 19* Cambridge, Mass. 1963.)

CHART 7.7

Trends in average nominal and real wages of wage-earners

Index numbers, 1955 = 100

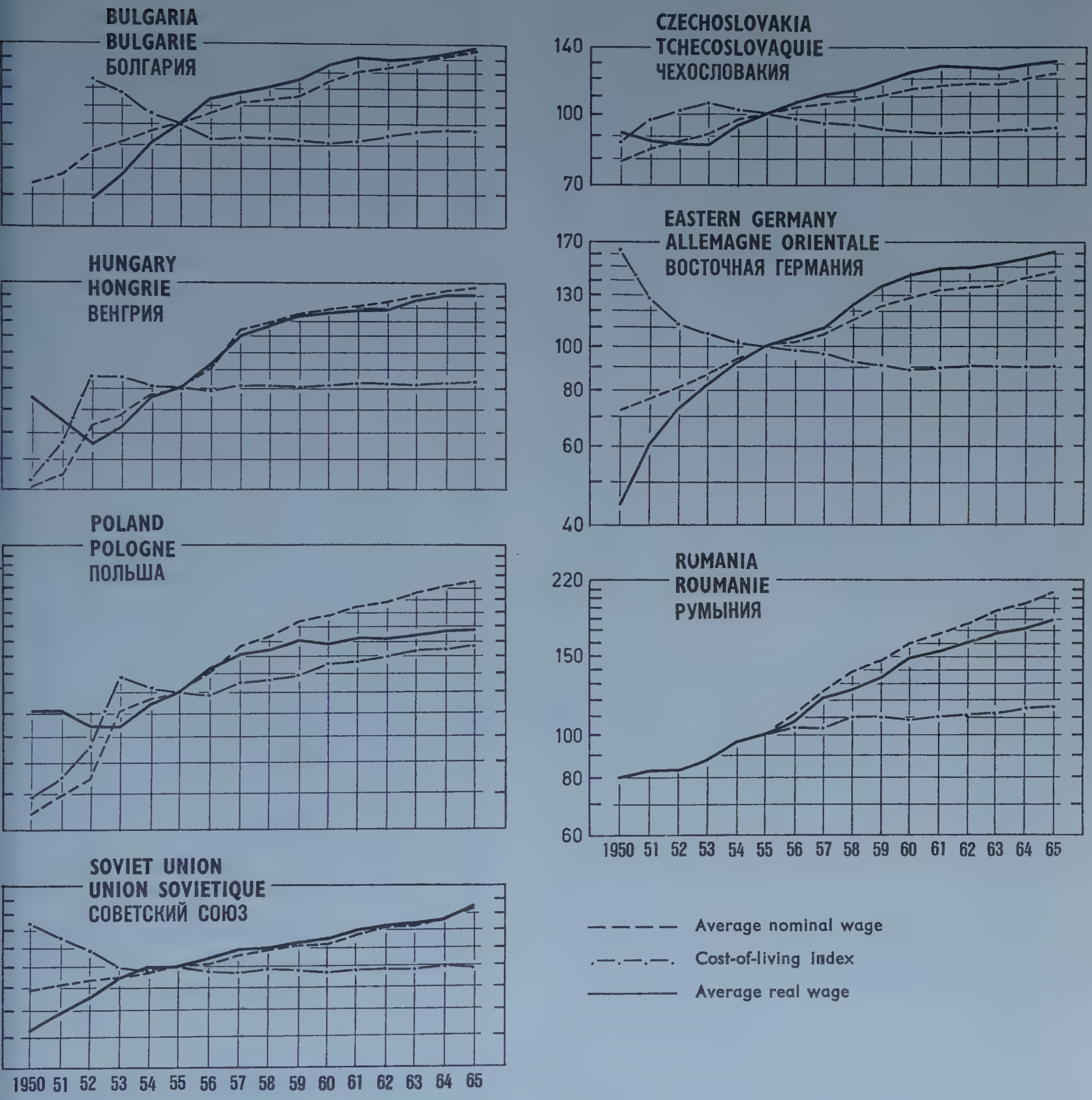

TABLE 7.14

The weights of factors in the growth of incomes of wage-earners [a]

Percentages

Country and period	Nominal wage fund (1)	Average nominal wages (2)	Employment (3)	Real wage per capita (4)	Average real wage per wage-earner (5)	Activity ratio (6)	Total real incomes per capita (7)	Average real wage per wage-earner (8)	Activity ratio (9)	Ratio total incomes wages (10)
Bulgaria										
1953-1965	*100*	*40*	*60*	*100*	*81*	*19*	*100*	*123*	*23*	*— 46*
1953-1955	100	43	57	100	84	16	100	115	21	— 36
1956-1960	100	37	63	100	65	35	100	90	48	— 38
1961-1965	100	43	57	100	203	— 103	100	82	— 42	60
Czechoslovakia										
1951-1965	*100*	*53*	*47*	*100*	. .	. .	*100*	. .	. .	. .
1951-1955	100	61*	39*	100	. .	. .	100	. .	. .	. .
1956-1960	100	52	48	100	79	21	100	102	27	— 29
1961-1965	100	39	61	100 [b]	72 [b]	28 [b]	100 [b]	53 [b]	20 [b]	27
Eastern Germany										
1951-1965	*100*	*76*	*24*	*100*	*83*	*17*	. .	. .	. .	. .
1951-1955	100	64	36	100	80	20	. .	. .	. .	. .
1956-1960	100	89	11	100	85	15	. .	. .	. .	. .
1961-1965	100	93	7	100	98	2	. .	. .	. .	. .
Hungary										
1951-1965	*100*	*66*	*34*	*100*	*63*	*37*	*100*	*74*	*43*	*— 17*
1951-1955	100	65	35	100	21	79	100	26	98	— 24
1956-1960	100	78	22	100	82	18	100	111	24	— 35
1961-1965	100	45	55	100	63	37	100	47	28	25
Poland										
1951-1965	*100*	*67*	*33*	. .	. .	. .	. .	. .	. .	. .
1951-1955	100	69	31	. .	. .	. .	. .	. .	. .	. .
1956-1960	100	79	21	. .	. .	. .	. .	. .	. .	. .
1961-1965	100	47	53	. .	. .	. .	. .	. .	. .	. .
Rumania										
1951-1965	*100*	*61*	*39*	*100*	*75*	*25*	. .	. .	. .	. .
1951-1955	100	54	46	100	75	25	. .	. .	. .	. .
1956-1960	100	83	17	100	104	— 4	. .	. .	. .	. .
1961-1965	100	48	52	100	48	52	. .	. .	. .	. .
Soviet Union										
1951-1965	*100*	*37*	*63*	*100*	*84*	*16*	*100*	*79*	*16*	*5*
1951-1955	100	36	64	100	100	—	100	100	—	—
1956-1958	100	42	58	100	83	17	100	62	12	26
1959-1965	100	37	63	100	65	35	100	64	34	2

Sources: National statistics.

NOTE. — See also footnotes to Table 7.12.

[a] The weights have been obtained by taking logarithms of indices. Thus if a = b.c.d., log. a = log b + log c + log d; and $100 = 100 \frac{\log b}{\log a} + 100 \frac{\log c}{\log a} + 100 \frac{\log}{\log}$

[b] 1961-1964.

of 35 per cent growth. However, the difficulty of measuring with any precision the changes in the cost of living in a period when a rapid succession of deep price cuts occurs in conditions of general shortages can hardly be overstressed. The concentration of price cuts on cheaper goods, the scarcity of which was particularly acute at the time, had the double effect of aggravating the supply/demand disequilibrium and of forcing the consumer to buy t more expensive items;[72] it must thus have led to importa changes in the structure of consumption.

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[72] See, for instance, Figurnov, *op. cit.*, p. 163; and I. Konnik *Voprosy Ekonomiki*, No. 5, 1966, p. 23.

he policy of relying almost entirely on price cuts as a ns of expanding real wages has since been criticized other grounds, too. In particular, it has been argued it weakened the strength of the incentives provided inking rewards to labour productivity, thus depriving planners of an effective instrument for stimulating put. Theories were subsequently developed seeking stablish a straightforward relation between the rewards productive personnel and that part of the increased ductivity which is a direct consequence of improved nsity and/or quality of labour input, leaving the dual benefits — stemming largely from technological gress — to be distributed among society as a whole rectly, through price cuts or collective consumption.[73] reover, it was stressed that income policies, in addition stimulating productivity, must take into account er needs of the economy, such as the priority develop- nt of certain sectors and branches or a modification of spread of incomes, and that such aims can be attained st readily when average nominal wages are raised.[74]

n 1954 the disproportionate growth of real wages in tion to labour productivity came to a climax, streng- ning the argument for the re-introduction of a built-in between the two variables, and the policy of substan- price cuts was abandoned and replaced by one of e stability, at least in global terms. Price adjustments e since become more selective and more closely ted to market conditions. In the period intervening ween the end-year of the Five-year Plan and the start he Seven-year Plan in 1959, prices of some foodstuffs at, butter, potatoes, fruit and vegetables) as well as of ustrial products (motor-cars, motor-cycles) and of holic drinks were raised a little. At the same time es of a wide range of goods (children's clothing, hard- e, radios, medicaments, watches) were cut.

he policy of relative price stability for consumers' ds was maintained in the Seven-year Plan (1959-1965), ch did provide, however, for some reductions of es charged for meals in public catering establishments, some corrective and marginal adjustments aimed nly at preventing over-stocking.[75] On the whole, the cy of holding the general price level steady succeeded, ticularly in the earlier years of the plan period. Price decreed during the period principally affected those ustrial goods for which demand was actually falling, h as watches, bicycles, radios, sewing machines, cam- and some textiles. Between 1958 and 1961 the state il trade price index fell slightly, both for foodstuffs for industrial goods (see Table 7.15). Since 1962, vever, the trend in the price level has taken a somewhat avourable turn for the consumer, particularly for se in lower income brackets, as a result of the steep increases in the prices of meat and butter decreed in mid-1962.[76] On the collective-farm markets the general level of food prices was in 1964 about 25 per cent above the 1958 level, but declined by a few percentage points in 1965.

The essential stability of the cost of living since 1955 underlines the importance of changes in nominal wages in the trends of real wages during the 1956-1965 decade. The latter were largely affected by three major factors: the 1956-1962 wage reform,[77] the gradual increases in the statutory wage minima, and the tax reliefs introduced during the period.

The main aspects of the wage reform, which was initiated in the fourth quarter of 1956 and extended over almost the whole period of the Seven-year Plan, are described in Chapter 8. Still, it is relevant to note here that in spite of the tightening of work norms and of the elimination of the progressive premia which had been chiefly responsible for high earnings in the past, average earnings increased as a result of the reform. According to Mayer's estimates,[78] average earnings rose quite markedly in the basic industries, metallurgy and chemicals (by 15 per cent for workers and 9-10 per cent for employees), in the food industry (15 per cent) and in transport (13 per cent); smaller gains were registered in light industry (10 per cent) and in engineering (4 per cent) — the branch most affected by the introduction of tighter work norms. But it is not clear to what extent these estimates succeed in separating the effect of wage regulations from the normal expansion of earnings due to improved labour productivity and other factors.[79] In the latter stages of the reform (in 1964-1965) steep salary increases (amounting on average to about 20 per cent) were granted to various categories of mostly non-manual workers in services sectors which had not benefited from the earlier settlements.[80]

See, for instance, Figurnov, *op. cit.; Sotsialisticheski trud,* 2, 1959; and D. Karpukhin, *Planovoe khozyaistvo*, No. 1, 1960.

Attempts to change income differentials by means of selective e cuts proved unsuccessful, and the 1947-1954 price reduction fortuitously benefited more than proportionately the better-off me groups. S. Figurnov, *Sotsialisticheski trud*, No. 5, 1959.

The comparison of the planned increase in the average nominal e by 26 per cent with one of "about one-third" in the average wage indicates that a drop in the general price level of the r of 5 per cent was anticipated.

[76] See the *Bulletin*, Vol. 14, No 2, pp. 26-27. On average, meat prices went up by 30 per cent and those of butter by 25 per cent. These price increases reflected basically increased payments to collective farmers for contractual deliveries of meat and butter which had previously been purchased at below cost prices. Even so, meat still carried a large state subsidy after 1962; according to S. Stoliarov and Z. Smirnova (*Vestnik Statistiki*, No. 1, 1963) state expenditure amounted in 1961 to 35 per cent of the retail trade price of meat and to 25 per cent in 1962; but the 4 per cent subsidy on butter was turned into a 15 per cent profit.

[77] The salary revisions of 1964-1965 can be considered as a sequel of this reform.

[78] V. F. Mayer, *op. cit.*

[79] If the impact of the wage reform is measured by the additional state contribution to the wage-fund consequent on the wage regulations (as distinct from the sums economized by the enterprises from their own resources) a somewhat different picture emerges. Thus, in 1956-1958, the cost of wage regulations to the state apparently amounted to about one billion roubles, and this represented about 2½ per cent of the wage fund in 1955. In 1959-1960 the extra state expenditure amounted to 2.2 billion roubles, or about 4½ per cent of the wage-fund in 1958. Over the whole period of the Seven-year Plan it was planned to spend about 10 billion roubles on wage regulations, this figure including, however, also the very substantial contribution to wage increases due to the planned rise in statutory wage minima. The 10 billion roubles represented about 20 per cent of the wage-fund in 1958 and about 40 per cent of the planned increment in the wage-fund, which was expected to increase by about 50 per cent over the seven years.

[80] See the SURVEY for 1964, Chapter I, pp. 34-35.

TABLE 7.15

Consumer price indices, 1950-1965

Index numbers, 1955=100

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria [a]																
Total	..	..	128.2	119.2	105.9	100.0	91.8	92.6	92.3	91.0	90.6	91.0	94.2	96.5	96.8	96.3
Food	..	..	123.5	118.5	103.8	100.0	93.3	95.1	95.1	95.1	96.0	97.5	102.1	106.8	107.2	106.9
Non-food	..	..	133.3	120.0	107.3	100.0	90.1	90.1	89.3	86.7	85.9	85.3	87.5	88.0	88.3	88.4
Czechoslovakia [b]																
Total	..	..	..	115.6	102.7	100.0	97.3	95.4	95.3	93.1	91.1	90.5	91.6	92.1	92.6	93.6
Food	..	..	..	110.3	101.5	100.0	97.1	94.4	94.3	92.1	89.7	89.4	91.4	91.5	92.0	92.6
Non-food	..	..	..	132.8	106.1	100.0	97.2	96.3	96.2	93.0	91.5	90.3	90.3	91.6	91.4	91.7
Services	..	..	..	100.8	100.2	100.0	99.6	99.6	99.6	99.4	100.6	100.6	100.6	101.0	103.0	108.4
Eastern Germany [b]																
Total	..	..	..	..	..	100.0	..	..	92.7	90.9	89.7	90.0	90.6	90.5	90.3	90.3
Food [c]	..	..	..	..	..	100.0	..	..	90.5	89.4	87.6	88.5	89.5	89.0	88.8	88.8
Non-food	..	..	..	..	..	100.0	..	..	93.2	89.4	88.6	88.2	88.4	88.4	88.4	88.4
Services	..	..	..	..	..	100.0	..	..	99.4	99.3	99.1	99.0	99.4	100.6	100.6	101.6
Hungary [b]																
Total	62.8	75.9	106.5	106.0	100.8	100.0	99.0	101.4	101.7	100.4	101.1	102.1	102.6	101.9	102.4	103.8
Food	55.4	72.7	108.0	107.5	102.8	100.0	99.9	103.1	102.8	100.5	101.9	103.4	104.3	103.6	104.7	106.5
Industrial goods [d]	73.7	74.5	105.6	103.0	100.0	100.0	97.4	98.3	99.7	99.7	99.7	99.6	99.5	98.3	98.1	97.8
Services	88.8	90.4	99.3	100.1	99.9	100.0	100.0	100.8	102.1	104.2	104.8	106.7	106.7	106.6	106.6	107.0
Poland [e]																
Total	61.5	..	..	109.4	102.5	100.0	99.0	104.3	107.1	108.3	110.2	110.9	113.6	114.5	115.9	117.1
Food	51.7	..	..	105.6	99.7	100.0	99.4	101.1	101.7	105.5	110.6	111.1	115.5	112.2	111.7	113.9
Non-food	75.1	..	..	117.5	106.9	100.0	98.2	106.9	109.9	107.8	106.4	106.3	106.5	109.8	111.0	110.9
Services	70.3	..	..	102.6	100.9	100.0	99.9	105.4	111.5	117.7	122.1	123.6	124.6	131.1	133.4	136.7
Rumania [f]																
Total	88.6	..	..	..	..	100.0	98.2	105.3	106.8	105.3	103.0	101.4	100.5	100.5	101.8	102.1
Food	79.1	..	..	..	..	100.0	99.3	103.4	106.0	108.4	107.4	105.4	104.9	105.9	110.1	111.0
Non-food	97.8	..	..	..	..	100.0	96.5	106.7	106.0	104.5	102.9	101.4	99.8	98.4	97.8	97.7
Soviet Union [a]																
Total	134.8	123.2	116.7	105.8	100.0	100.0	100.0	100.0	102.2	101.4	100.7	100.0	101.4	102.2	102.2	101.5
Food	144.0	128.4	117.7	103.5	100.0	100.0	101.4	101.4	105.7	105.0	104.3	103.5	106.4	108.5	107.8	107.8
Non-food	123.1	117.2	116.4	108.2	100.0	100.0	99.3	99.3	99.3	98.5	97.0	96.3	96.3	96.3	95.3	94.0

Sources: National statistics.

NOTE. — Data for Czechoslovakia, eastern Germany and Hungary refer to the cost-of-living index based on the pattern of consumption of wage-earners; those for other countries are retail trade price indices.

[b] Goods and services.

[c] Including beverages and tobacco.

[d] Excluding clothing.

[e] Price index of goods and services for consumption purposes.

Another source of increased wages during this period ıs the raising of the statutory wage minima. At the ginning of 1957 the "floor" was raised to 30-35 roubles r month, and the targets of the Seven-year Plan cluded further increases, in two stages, up to 50-60 ubles per month. It was anticipated that at least one-ird of the total increment in the wage-fund would rive from this source.[81] In the event these objectives ere only partly fulfilled. The introduction of new basic ıge rates and the elimination of the lowest grades of the ıge tariffs that had accompanied the wage reform led a *de facto* increase in minimum wages (see Chapter 8); ıt these varied greatly between sectors and branches d did not possess the mandatory character of a statu-ry minimum. Only at the beginning of 1965 was the inimum wage of 40-45 roubles a month made legally nding.

Finally, several important modifications took place ıring the period under study in the Soviet fiscal system, fecting trends in net (after tax) earnings. In addition to come tax proper, the Soviet tax system had relied iite heavily, particularly during the war, on state loan ues. In the mid-1950s the income tax levy on wage-rners amounted to roughly 8-9 per cent and that of the ate loans to about 7-8 per cent of the wage-fund.[82] The annual subscriptions of the loans, which reached a vel of about 3½ billion roubles in the years 1950-1952, opped to almost half this figure in 1953-1954, but gained their previous level in the following two years. 1958 subscriptions were discontinued and redemptions ere postponed for 20 years.[83]

The fiscal policies followed during the period involved gradual relaxation of direct taxation. Thus, the tax emption limit was raised from 26 to 37 roubles per onth in 1957, when some relief was also granted to ose earning less than 45 roubles per month; and with fect from the beginning of 1958 the bachelor's and nall families' tax was abolished for the great majority those assessable.[84] Finally, the 21st Party Congress cepted a plan for a gradual elimination of income tax together.[85] In the event, full tax exemptions on earnings up to 60 roubles per month and partial relief for those in the 61-70 roubles bracket were granted in 1960 and 1961, but further reliefs were postponed.

Partly because the price level remained stable when a decline of some 5 per cent had been planned, and partly because average nominal wages rose by 22 per cent rather than by the 26 per cent planned, the Seven-year Plan goal for an increase in average real wages of about one-third was not met. On the other hand, the total wage-fund grew by about 72 per cent — much above the target increase of 54 per cent — a result of the more than 40 per cent increase in the number of workers and employees, compared with 22 per cent planned.[86]

Eastern Europe

Over the 1950-1965 period as a whole, the nominal wage-fund increased nearly sixfold in *Poland* and about one-third of this growth was the result of expanded employment. The rate of growth of the wage-fund was fastest during the first quinquennium, covering largely the period of the Six-year Plan (1950-1955), when it was increasing at an average rate of about 20 per cent per year, compared with one of about 10 per cent in the second and one of about 7 per cent in the most recent quinquennium. Over these two half-decades the contribution of employment fell from about one-third to one-fifth, but it rose steeply to exceed 50 per cent in 1961-1965 (see Table 7.14).

During the 1951-1955 period, basic wage rates changed very little. The increase of almost 90 per cent in the average nominal wage was due partly to the expansion of earnings associated with productivity improvement, but also — and to a large extent — to a wage drift which, in turn, led to a chronic overfulfilment of the wage-fund plans and to a wage price spiral. Beginning in 1956, the wage-rate standstill was eased and, while no large-scale wage reform was introduced, considerable efforts were made to remove some of the accumulated disproportions. The annual cost of wage regulations amounted to 5.5 billions zlotys in 1957, 4 billion in 1958 and 1.5 billion in 1959, which represented about one-half of the total increment of the wage-fund over the three years. One source estimates that over the period of the First Five-year Plan (1956-1960) nearly two-thirds of the increase in the total wage-fund was due to causes other than basic wage settlements.[87] The scope for further overhauling the wage system was much reduced during the Second Five-year Plan (1961-1965), when the average

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[81] S. P. Figurnov, *op. cit.*, p. 144.

[82] S. P. Figurnov, *op. cit.*, pp. 177-182.

[83] Between 1951 and 1956, the sums repaid to the population were creasing very fast, so that the net incidence of the levy varied eatly *(billion roubles)* :

Year	*Subscriptions*	*Repayments*	*Net revenue to the state*
1947 . . .	2.2	0.5	1.7
1951 . . .	3.3	0.5	2.8
1952 . . .	3.7	0.7	3.0
1953 . . .	1.8	1.0	0.8
1954 . . .	1.7	1.0	0.7
1955 . . .	3.1	1.2	1.9
1956 . . .	3.4	1.4	2.0
1957 . . .	1.9	0.5	1.4

Source : S. P. Figurnov, *op. cit.*, pp. 180-182. This source also states that repayments would have exceeded 2 billion roubles by 1960 "reducing the effectiveness of the loan".

[84] According to K. Plotnikov (*Gosudarstvenni budzhet SSSR*, oscow 1959, p. 115) 85 per cent of tax-payers in this category re exempted by the decree.

[85] To be achieved by raising the tax exemption minimum to roubles (monthly earnings) in 1960, 60 roubles in 1961 and roubles in 1962. These measures were to be accompanied by a per cent reduction in tax rates in the 50-60 roubles bracket in 1960, 60-70 roubles bracket in 1961 and 70-80 roubles bracket in 1962. In 1963 tax rates were to be reduced by 40 per cent for workers earning 80-90 roubles and in 1964 for those earning 90-100 roubles a month; and by 1965 the collection of income tax was to have ceased. As the full abolition of the income tax would have benefited the higher income groups more than proportionately, a provision was made for reducing the basic wage rates of workers in the 100-200 roubles per month bracket on a graduated scale expressed as a percentage of the income tax relief granted; and workers earning more than 200 roubles per month would have their wages reduced by the full amount of the income tax hitherto paid.

[86] Employment in the national economy would have increased by 38 per cent but for the inclusion of 1.4 million members of industria co-operatives in 1960.

[87] Zienkowski, *op. cit.*, p. 251.

nominal wage level was growing rather slowly (by 3½ per cent a year, on average) partly because of fast and above-plan rates of growth of employment.[88] During this whole period the total cost of wage regulations amounted to 6.6 billion zlotys, or to hardly more than 10 per cent of the total increment in the wage-fund.[89]

Changes in the statutory minimum wage and in the limits of income-tax exemptions were other elements influencing the growth of money wages in Poland. The former were raised from 360 to 500 zlotys in 1956, to 600 zlotys in 1960, to 700 zlotys in 1961 and to 750 zlotys in 1963, and were accompanied by increases in the tax-exemption limits to 500 zlotys, 650 zlotys, 850 zlotys and 1,000 zlotys at the respective dates. Although the improvements in wage minima were quite substantial, they barely matched cost-of-living increases — particularly when the 15-years period as a whole is considered.[90]

By and large, the movement of consumer prices has been a more important factor in determining changes in real incomes in Poland than in other eastern European countries, except perhaps during the earlier years of the 1950s when inflationary tendencies were prevalent throughout eastern Europe. Between 1949 and 1953 the retail price index almost exactly doubled.[91] Prices of foodstuffs rose more than the average (those of meat increased 2½ times between 1950 and 1953). After the monetary reform of 1953 prices went down and the cost-of-living index was in 1956 almost 10 per cent below its 1953 level; since 1956 it has, however, risen steadily and stood in 1965 at about 30 per cent above the 1956 level. The price index of goods and services shown in Table 7.15 indicates that during the past ten years the prices of services have constituted the most dynamic element of the index. After some significant increases in the prices of fuel and raw materials in 1957 and 1958, the price level of non-food articles changed relatively little during the following years. Prices of food, on the other hand, rose until 1962, but have declined a little since.

Thus, the fast expansion of employment and the rather steep increases in the cost of living turned the almost sixfold expansion of the total nominal wage-fund over the years 1950-1965 into an increase in average real wages of about 50 per cent. The gains in average real wages amounted to less than 2 per cent a year during the first quinquennium and to only about 1½ per cent in the last one. The most beneficial to the Polish wage-earners were the years 1953-1959, during which the cumulative average reached the high rate of 7.7 per cent annual growth. As a result of these trends, the goals of the Six-year Plan (1950-1955) and of the Second Five-year Plan (1961-1965) remained largely underfulfilled, whereas those of the First Five-year Plan of 1956-1960 were very nearly met (see Table 7.9).

Compared with the development in Poland, the growth of the total wage-bill in *Czechoslovakia* by 2.3 times over the period under review was small. Nevertheless, in terms of average real wages, trends were similar in the two countries, the increases slightly exceeding 50 per cent. This contrast strikingly illustrates the divergencies between the two countries in respect of employment trends and price policies. However, in spite of the relatively limited scope in Czechoslovakia for shifting agricultural manpower towards other sectors, the non-agricultural labour force rose by 49 per cent over the period 1950-1965, largely owing to a successful mobilization of urban labour reserves.

This expansion of employment contributed nearly one-half of the total growth of the wage-fund during the 15 years under review, and the data in Table 7.14 show that the weight of this factor rose from less than 40 per cent in the 1951-1955 period to more than 60 per cent in the last quinquennium. This variation over time was due not so much to an accelerated rate of growth of the labour force, the pace of which was about even over the three sub-periods, as to a marked deceleration in the growth of average nominal wages, the average annual rates declining from 4.8 per cent in 1951-1955 to 2.6 per cent in 1956-1960 and to 1.7 per cent in 1961-1965.

The rather steep increases in average money wages in the first few years after the reorganization of the Czechoslovak economic system in 1948 were largely a consequence of the inadequacy of the instruments used for wage planning and control. It was not until the beginning of 1952 that a comprehensive system of employment and wage planning on a national scale was introduced. Since that time a comprehensive wage plan has been drafted periodically for the entire national economy, comprising targets for the wage-fund and average wages for economic sectors, branches and production units, and the State Bank has been given the task of controlling the financial expenditure of the enterprise. These measures put a stop to the rapid and uncoordinated wage drifts of the past but could not cope with the excess of purchasing power accumulated in the previous years. Hence the monetary reform of June 1953.

After 1953 the growth of average nominal wages was more effectively checked, but employment plans continued to be overfulfilled[92] and this made a large contribution to the growth of the total wage bill in the years 1956-1960 and, still more, during the Third Five-year Plan (1961-1965), when the increase in employment was anned to account for 45 per cent of the total increase in e wage-fund;[93] in the event its contribution exceeded per cent.

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[88] A. Burski, the Chairman of the State Committee on Employment and Wages, *Trybuna Ludu*, 1 April 1966. Employment in the socialized sector rose by 1,250,000 persons compared with a planned increase of 735,000. J. Obodowski, *Nowe Drogi*, No. 5, 1966, p. 306.

[89] Obodowski, *op. cit.*, p. 307.

[90] During the 1950s there was a tendency for gross wages to rise at a slightly faster rate than net (after tax) wages; but it was reversed from about 1960 onwards — reflecting some relaxation of direct taxation. It is clear, however, that the effect of taxation — whether considered from the angle of long-term trends or short-term changes — on the take-home pay has been marginal in Poland.

[91] It is generally recognized that this index, which relates to the total population underestimates the increase in urban living costs, and several estimates have been made adjusting the 1950-1953 trend upwards by a few percentage points. See Pajestka in *Studies on the theory of reproduction and prices*, Warsaw 1964, p. 223; Nasilkowski in *Ekonomista*, No. 3, 1958, p. 579; and ECE estimates in the *Bulletin*, Vol. 9, No. 3, p. 35.

[92] Over the period 1956-1960 employment in national economy rose by 13 per cent against 8 per cent planned and in 1961-1965 by 14 per cent against 9 per cent planned.

The evolution of the Czechoslovak wage system in the 50s was not free of the unwanted effects and distortions perienced by most other countries of the area, and some -organization of the system took place in 1958-1960.[94] owever, the effect of the measures then introduced on e trend in average nominal wages of all wage-earners ppears to have been very small.

There are no official data on changes in the cost of ving before 1953. Some estimates drawn up on the sis of a comparison of the value and the volume of dividual consumption (excluding consumption in nd) indicate that between 1950 and 1953 the average vel of consumer prices rose by some 20 per cent, using a drop in the average real wage over the three ears of some 5 per cent.[95] The cost-of-living index, ased on the consumption pattern of wage-earners' milies, fell by a few per cent after the 1953 reform and ntinued on a gentle downward trend until 1961 when it as about 15 per cent beneath its 1953 level. In the followg years the index rose again, chiefly as a result of creased prices of some better quality foodstuffs and rvices, including rents.

Since the increase in average nominal wages was oderate, the price movement just described greatly fluenced the evolution of real wages. After the pre-1953 tback, the latter moved up systematically until 1961, an average rate of about 5 per cent per year. Between 61 and 1963, the slight increase in the price level incided with virtual stability of nominal wages, and al wages declined a little. However, some recovery took ace in the following two years. Nevertheless, average al wages rose during the 1961-1965 plan period by ly 6 per cent, compared with the 25 per cent growth iginally planned, a pattern in sharp contrast with the tainments of the 1956-1960 plan, when the increase in erage real wages of 25 per cent came very near to the al of 30 per cent set in the plan.

Hungary belongs to the group of countries where there as swift expansion of the total wage-fund in the 1951-65 period. Although the increase of 4.6 times over the se year was less than in Poland and Rumania, Hungary common with these two countries experienced a disct slowing down of the growth rate throughout the eriod in question; and, as in Poland and Rumania, e-third of the overall growth of the wage-fund in ungary was due to expanded employment, the weight this factor declining to about one-fifth in the 1956-60 period, but rising steeply to more than one-half in e 1960s. Both the rates of expansion of employment and, a lesser extent, of the average nominal wage decelerated 1956-1960 compared with the early 1950s, but employent recovered somewhat in the 1960s when nominal wages rose by a small margin of 12 per cent over five years.

The weaknesses of the wage system, characteristic of most countries of the area and which made themselves felt particularly acutely in the early 1950s, were much in evidence in Hungary, where rapid and unplanned growth of average nominal wages during this period occurred in spite of frequent revisions of working norms. Especially in 1952 and 1954 the rises in average wage levels were largely due to a wage drift. Following salary increases for doctors and teachers in 1954-1955, a number of more general upward wage adjustments was introduced in 1956, mostly in the lower wage brackets; but even in that year only one percentage point of the 5.6 per cent increase in average earnings during the first three quarters resulted from premeditated policy measures.

In the aftermath of the 1956 events, industrial enterprises introduced a *de facto* minimum wage of 800 forints per month, piece rates were generally abandoned in favour of time rates, and wage discipline was seriously weakened. After consolidation of the situation in the early months of 1957, the government decreed a large number of measures which considerably changed wage relatives, and at the same time it introduced control of average wages in order to ensure compliance with the new wage relatives and in order to avoid wage drift without discouraging growth of employment. The wage and salary adjustments carried out as part of this reform raised the level of nominal wages in the state sector by 17 per cent. The range of improvement varied from 11 per cent in financial institutions to 24 per cent in building industry; and within industry the proportionately greater increase of low wages favoured the food, paper, timber and building-material branches, while coal miners received the highest priority.

Thus, the years 1955 to 1958 were a period of very swift expansion of average nominal wages, which rose by 40 per cent, accompanied by some decrease (followed by a quick recovery) of employment, which by 1958 had reverted to the pre-1956 level. The system of average wage control proved on the whole effective during the following years, when nominal wages were rising slowly, partly as a result of minor wage and salary revisions granted in the course of the 1961-1965 Plan period.[96] However, some symptoms of wage drift re-appeared in 1963, ascribed largely to a tighter labour market, and these led in 1965 to a new campaign for the revision of working norms and for other deflationary measures.

In the early 1950s, the movement of consumers' prices in Hungary followed broadly the same pattern as in most other countries of the area: steep increases until 1952-1953, followed by some reductions. In Hungary the level of prices fell several percentage points in 1954; thereafter a policy of stabilizing the cost of living was successful until the reappearance of a slight upward trend during the last two years of the 1961-1965 quinquennium. Characteristically, prices of foodstuffs rose much more than those of manufactured goods during the early inflationary period; and the upward turn of the cost of living in the 1960s was entirely due to increased prices of foodstuffs and services, prices of industrial goods showing a downward trend (see Table 7.15).

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[93] M. Hronsky, *Odmena za praci v CSSR*, Prague 1960, p. 70.

[94] See Chapter 8 below.

[95] L. Cyhelsky, *Statistika a demografie*, II, Prague 1961, pp. 99-100. decline in average real wages of the same order of magnitude nerges also from the estimates prepared by ECE Secretariat and blished in the SURVEY for 1953, Chapter 4, p. 65.

[96] These included some wage increases in local government, transport and communications, and salary rises in banking and the civil service.

Between 1949-1950 and 1952, the cost of living rose markedly faster than nominal wages and real wages fell by a large margin of nearly 20 per cent. Some improvement set in, however, in 1953 when prices stabilized and, more markedly, in 1954 when wages rose again and prices fell; by that year the 1950-1952 losses had been fully recovered. Further significant increases in average real wages in 1956 and 1957 were followed by a more gentle upward trend in 1958 and 1959. By 1960 the level of average real wages was nearly 50 per cent higher than in 1955 and had nearly doubled compared with the trough of 1952. However, this upward trend came to a halt in the 1960s, when nominal wages rose only marginally faster than the cost of living.

The rapid expansion of average real wages in the first few post-1956 years resulted in a marked overfulfilment of the original 1956-1960 Five-year Plan and of the Three-year Recovery Plan of 1958-1960 (see Table 7.9). The 1961-1965 Plan replaced the average real wage target by that of per capita real personal income of wage-earners, and the planned goal of a 16-17 per cent increase of the latter was attained.

The number of workers and employees rose in *eastern Germany* by only about one-fourth over the period 1951-1965 as a whole, and the contribution of this factor to the growth of the total nominal wage bill (which increased 2.5 times) amounted to 25 per cent— the smallest of all the countries of the area. Moreover, the latter figure was largely a reflection of developments in the early 1950s: during the First Five-year Plan (1951-1955) employment expanded by 20 per cent and its share in the growth of the wage bill exceeded one-third; in the following decade, however, the non-agricultural labour force remained virtually stationary, and the wage-fund grew almost entirely as a result of the increase in the average level of earnings.

During the First Five-year Plan the wage-fund rose by two-thirds compared with a planned increase of 31 per cent, and average nominal wages increased by 39 per cent against 17 per cent foreseen by the plan.[97] As supplies of consumer goods tended to lag behind the planned targets, inflationary pressures appeared, reaching a climax in the first half of 1953. A series of deflationary measures was taken by the government in the summer of that year (including price rises for some foodstuffs, textiles, and railway fares, and a reduction of piece-rates), but most of these were soon rescinded under public pressure. The difficulties of that period were illustrated by the maintenance of food rationing until 1958.

As the rate of growth of average wages slowed down during the Second Five-year Plan (from 6.8 per cent in 1951-1955 to 5.2 per cent in 1956-1960) and the expansi of employment came almost to a halt, the purchasi power of the wage-earning population rose only half much as in the preceding quinquennium. Some wa adjustments amounting to about 2-3 per cent of t current wage-fund were granted in 1956; and t narrowing of zonal wage differentials contributed to t expansion of the latter. Otherwise, changes in the wag fund were more closely linked to productivity impr vements in order to compensate for the increasi shortages of labour (see Chapter 8).[98]

In the years 1961-1965 the expansion of employme came to a virtual standstill, whereas average nomin wages rose by only about 10 per cent and thus accounte for almost the entire growth of the wage-fund. The peri was characterized by a continuous preoccupation wi the reform of the wage system in the direction mention above.

The declining trend in the growth rate of avera nominal wages during the whole period under study w actually deepened in real terms by the opposite mov ment of consumer prices. This was so because the pri level was falling rapidly during the first phase wh nominal wages were increasing rapidly, but decelerat in the second quinquennium, and at the end remain stationary when nominal wages grew little. Even thou the estimated annual rate of increase of average re wages (of full-time workers in the productive sphere the socialist sector) of 18 per cent in the 1951-1955 peri shown in Table 7.16, may be exaggerated by the stati tical methods used,[99] it obviously presents a mark contrast to the later developments, particularly in t 1960s when this rate hardly exceeded 2 per cent per yea and this contrast extends to the actual attainments co sidered in relation to the targets of the long-term plan which were greatly exceeded in the case of the first tw plans (1951-1955 and 1956-1960), but largely underfu filled in the case of the Seven-year (1959-1965) Plan.

In *Rumania*, employment outside the collective far doubled over the period 1951-1955 and average nomin wages tripled, causing a more than sixfold expansion the total wage bill. During the first and the third quinque nia the weight of the two factors was evenly balance but in the period 1956-1960 the rate of expansion of t labour force slowed down considerably (between 19 and 1958 it came to a complete halt) and the growth the wage-fund was almost entirely a function of the co sistently rapid rate of increase of average wages.

A feature of the development of incomes in Ruman was not only the very fast growth of average nomi wages over the whole period of 15 years, second only Poland, but also the rather even tempo of this grow throughout the period compared with other countri In particular, although there has been a very mark

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[97] The improvement in average wages resulted mainly from the upward revision of basic rates for skilled workers in coal-mining and metallurgy in 1952, for unskilled workers in August 1953, and for skilled workers in non-priority branches in 1954.

[98] The introduction of a minimum wage of 220 DM in 1958 h only very slightly affected the overall wage average.

[99] The cost-of-living index used as a deflator for this period one based on the expenditure pattern of the whole populati Moreover, this was the period of rationing, multiple prices a supply shortages, when the assessment of the impact of price c was particularly complex.

TABLE 7.16

Average real wages and incomes of wage-earners in selected periods

Annual cumulative rates

Country and period	Real wage		Real income
	Per wage-earner	Per capita	Per capita
Bulgaria			
1953-1965	*6.0*	*7.5*	*6.0*
1953-1956	13.3	14.5	10.8
1957-1960	4.2	9.2	6.2
1961-1965	1.9	0.9	2.4
Czechoslovakia			
1951-1965	*2.5*	..	..
1951-1955	1.9	..	..
1956-1960	4.5	5.8	4.5
1961-1965	1.1	..	2.0 [a]
Eastern Germany			
1951-1965	*9.0*	*11.0*	..
1951-1955	17.9	22.8	..
1956-1960	7.4	11.6	..
1961-1965	2.5	2.6	..
Hungary			
1951-1965	*3.5*	*5.4*	*4.7*
1951-1955	0.9	3.8	3.5
1956-1960	8.0	9.6	7.2
1961-1965	1.6	2.3	3.4
Poland			
1951-1965	*2.8*	..	..
1951-1955	1.9	..	..
1956-1960	5.2	..	..
1961-1965	1.4	..	3.4 [b]
Rumania			
1951-1965	*5.6*	*7.6*	..
1951-1955	4.6	6.2	..
1956-1960	8.2	7.9	..
1961-1965	4.1	8.6	..
Soviet Union			
1951-1965	*4.3*	*5.1*	*5.4*
1951-1955	6.8	7.2	7.3
1956-1958	2.9	3.5	4.8
1959-1965	2.8	4.3	4.4

Sources: National statistics.

[a] 1961-1964.

[b] *Gospodarka Planowa*, No. 17. 1966, p. 7. It is not clear whether this figure refers to per capita wages or per capita total incomes.

deceleration in the 1960s compared with the 1950s, the rate of growth of wage income was sustained at a high level much above that observed in other countries (see Tables 7.12 and 7.13).

Data are scarce for the early 1950s, but in that period the movement of nominal wages seems to have been governed by uncontrolled forces to a larger extent than subsequently; and it is clear that at that time the wage system tended to get out of hand for the same reasons which prompted reforms in other countries. The Rumanian wage reform announced in December 1956 — and which broadly followed the Soviet pattern — was largely carried out in the years 1957-1959. It provided, *inter alia*, for some revisions of basic wages favouring the hitherto neglected sectors and skills — such as education and health, and technical and administrative staff in general.[100] Further rounds of basic wage adjustments occurred in 1961-1962 and in 1964-1965. On the earlier occasion some special categories such as foremen and enterprise directors benefited, but the later revision brought more general improvements leading to an increase in the average nominal wage level of some 10 per cent (graduated by grades and skill), with above-average gains for teachers, medical personnel and the armed forces. Improvements in gross wages were accompanied by tax reliefs granted in 1953, 1959 and 1964. The earlier reforms resulted in a 30 per cent cut in tax incidence.[101] The aim of the 1964 adjustments was to bring further relief to incomes below 1,700 lei per month.

The comparison of trends in nominal and real wages over the period 1951-1955 indicates that the cost of living rose over these years by some 17 per cent. No data are available for the intermediate years, but there are grounds for believing that the peak was reached around 1952 at the time of the currency reform. The suppression of rationing in 1954, offset largely by a cash compensation paid to wage-earners and their families, must have pushed up the level of prices again in that year.[102] Further price increases occurred between 1955 and 1958, resulting in an overall rise in the cost of living of some 10 per cent, but the price level remained fairly stable for several years thereafter. However, the below-plan expansion of livestock output led to some market disequilibria in the last years of the Six-year Plan period, necessitating further upward adjustment of food prices, particularly of meat,[103] only slightly offset by reduced prices of manufactures.

Thus, between 1950 and 1958, the real benefit of the rapid growth of nominal wages was eroded by the rising price level, whereas the stability of consumer-prices after 1958 permitted the maintenance of a fast expansion of real wages in spite of a marked slowing down in the rate of growth of nominal wages. Nevertheless, there was a quite marked deceleration in the rate of growth of real wages during the last years of the Six-year Plan; and whilst the target for the 1956-1960 Plan was actually significantly overfulfilled — real wages increasing at an average rate of 8.2 per cent per year compared with a 5.4 per cent rate planned — the opposite was true in the later period, when the actual growth rate of 5.1 per cent a year fell short of the 5.8-6.4 rate planned.

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[100] Upward wage adjustments were instituted in 1955 in coal-mining, wood, leather and printing industries, and in 1956 in petrol, chemicals, electric energy and building materials.

[101] S. Taigar, *op. cit.*, p. 139. According to the same source, the incidence of taxation declined over the 1949-1959 decade by 83 per cent for earnings of 600 lei and by 43 per cent for those of 3,000 lei per month.

[102] The data in Table 7.16 suggest that the increase in the overall price level over the period 1950-1955 was almost entirely due to increased prices of food.

[103] In 1964 the price level of foodstuffs sold in the state retail trade rose by about 4 per cent. As in 1954, compensation was paid to the wage-earners partly to offset the effect of price increases for meat.

Between 1952 and 1965 the total wage-fund increased in *Bulgaria* more than 3½ times. About 60 per cent of this growth was due to the expansion of employment and the remaining 40 per cent to the increase in average nominal wages.[104] Employment in the national economy was increasing particularly fast in the early and in the late 1950s (see Table 7.13); but the upward movement in average nominal wages proceeded virtually *pari passu*, with the result that the relative contribution of these factors to the growth of the wage bill changed relatively little during the main phases of Bulgaria's development.[105]

Apart from the tariff revision of 1953, which was directly related to a monetary reform and the abolition of rationing, the Bulgarian wage system has undergone two major reforms. First, in 1957 a minimum statutory wage of 40 leva per month was decreed, and at the same time a general upward adjustment of basic wages in the "below 45 leva" bracket was instituted, lifting the average wage in this category by some 15 per cent. Then, in 1960 the minimum wage was raised to 47 leva for employees and 50 leva for workers, and a general improvement of basic wage rates was decreed for workers and employees in most branches of heavy industry and in construction.[106]

The 1952-1956 period saw a price policy aimed at a rapid reduction of the cost of living, which in fact fell by nearly 30 per cent and thus contributed greatly to the two-thirds increase in average real wages registered during this period.[107] This policy was radically changed in 1956 and replaced by one based on the stabilization of the cost of living, the index of which hardly moved between 1956 and 1961. In the 1960s, however, the need to improve the terms of trade of peasants led to a rise in the level of food prices in the towns, which went up by some 11 per cent and the cost-of-living index increased slightly.

As in eastern Germany and, to a certain extent, in the Soviet Union, the deceleration in the rate of growth of nominal wages in Bulgaria was accompanied by an adverse sequence of price movements in the sense that the period of price reductions was followed by one of
price stability and, in turn, by one of some increase
living costs. Consequently, the rate of increase of avera
real wages dwindled from an annual average of 13.3 p
cent in 1953-1956 to 4.2 per cent in 1957-1960 and 1.9 p
cent in 1961-1965.

(ii) *Factors in the growth of living standards of wage-earners*

In conditions of rapidly expanding employment oppo
tunities and a usually concomitant increase in the numb
of wage-earners per family — and by and large su
conditions were present in most countries of the area
least some of the time — trends in real wages per wag
earner provide an incomplete, sometimes even misleadi
picture of the effects on the living standards of the wag
earning population of income from employment. Re
wage income per capita or, better still, per consumpti
unit, more accurately reflects changes in living sta
dards.[108] The index of wage income per capita is a functi
of the average real wage per wage-earner and of t
economic activity rate in the population concerned. Wh
planning the improvement of living standards, the pla
ners have — in principle and within limits — a certa
freedom of manœuvre in stressing one factor at t
expense of the other. However, as already mentioned, t
postwar record of the actual evolution of incomes h
demonstrated that success in implementing the polici
incorporated in the long-term plans was by no mea
complete nor universal. Time and again, the plan targ
for the expansion of non-agricultural employment we
exceeded, partly as a result of a more intensive uti
zation of labour reserves within the family than expect
forcing the planners to reduce the target growth
average real wages per wage-earner. Or, put different
the targets for per capita income growth were often m
— despite the non-fulfilment of plans for the expansion
real wages per wage-earner — by means of a compe
satory expansion of employment.[109]

Statistical analysis of the relative importance of t
relevant variables is hampered by scarcity of data
activity ratios in wage-earners' families and on trends
the population that is dependent on wage-earners. Hen
for some countries the simplifying assumption had to

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[104] Between 1950 and 1965 the total wage-fund rose by more than five times. However, information on real wages and incomes is scanty for the pre-1952 period. It is known, however, that between 1948 and 1952, when average nominal wages rose by one-third, consumer prices rose by a substantial margin probably in excess of the expansion of nominal wages. This latter hypothesis is supported by a decline in the per capita consumption of main foodstuffs and of textiles experienced during this period (see the SURVEY for 1960, Chapter VI, p. 39).

[105] The conspicuous exception was the period of abruptly accelerated activity 1958-1960, when the rate of expansion of employment exceeded that of nominal wages 20 times, compared with 25 per cent registered during the whole period 1953-1965.

[106] As a result of the changes in wage tariffs, average basic wages rose over the period 1951-1960 by 44 per cent in machine-building, 36 per cent in metal-working, 54 per cent in chemicals and 31 per cent in building materials (according to Gorcheva, *op. cit.*). In the latter branch average earnings rose by 60 per cent over the same period, but no comparable data are available for other branches.

[107] In the state retail trade, prices of food declined by 25 per cent and those of other articles by one-third.

[108] A still better indicator of changes in living standards is
capita (or per consumption unit) income from all sources. Some
of such indicators is made below. Even these cannot pretend, ho
ever, to take into account all the multiple facets of welfare. Amo
the factors which are left out, but which were of particular releva
to trends in living standards in the centrally planned econom
during the period under review, at least two need to be mention
First, with the possible exception of the early investment phase, th
has everywhere been a continuous inprovement in the variety
assortment and in the quality of goods supplied to the consume
Second, in several countries, notably the Soviet Union, there
been a movement towards a reduction in the working week, and
increase in leisure time (including lengthening of paid leave)
general.

[109] However, this alternative entails some adverse consequen
from the standpoint of family welfare in so far as it involves ad
tional labour input. The impact of this tendency on the dif
entiation of incomes between families was already mentio
in section 7.1 above.

made that the size of the population of wage-earners and their dependants moved in parallel with the growth of urban population. This is clearly a very rough approximation to the truth;[110] therefore the conclusions drawn from Tables 7.12 and 7.14 with regard both to time trends and inter-country comparisons should be considered as illustrating only orders of magnitude.

Secondly, it needs to be borne in mind that the observed increases in derived activity rates could have resulted in part from factors other than the increased incidence of additional family labour. Thus, the massive shifts of agricultural population to towns entailed some increase in the urban activity rate, in so far as they consisted to a large extent of single young persons. At some periods changes in the age-structure of the population had a similar impact, whenever declining birth-rates reduced the share of children of below working-age (provided — and to the extent — that this influence on the share of population of working-age was not offset by the increase in the share of persons over working-age due to the "ageing of population"). The theoretical framework of the issues involved is referred to in Chapter 9, section 9.3.

Bearing these reservations in mind, the following generalizations can be ventured. First, over the whole 15-year period real wages per capita rose everywhere faster than real wages per wage-earner, indicating an increase in economic participation ratios. The contribution of the latter factor to the increment in per capita wages varied from less than one-fifth in the Soviet Union and eastern Germany to nearly two-fifths in Hungary.[111] (See Tables 7.12 and 7.14.)

Second, there have been wide fluctuations over time in the relative importance of real wages (per wage-earner) and of activity rates, and marked variations in the patterns experienced by individual countries. In Bulgaria the activity rate rose only a little in the 1953-1956 period, and seems even to have declined in the 1960s,[112] whereas its contribution was considerable in the 1957-1960 period.[113] In eastern Germany the fuller utilization of urban labour reserves was important throughout the 1950s, but petered out in the 1960s, when wages per capita and per wage-earner rose *pari passu.* The rise in the activity rate was also very important during the first quinquennium in Hungary, when it was responsible for about 80 per cent of the increase in per capita wages, but its contribution diminished in 1956-1960 to about one-fifth, to rise to about one-third in the following five years. In Rumania the activity rate increased during the first and the last quinquennium, but remained stable in the late 1950s, when employment was stationary. The trend in the Soviet Union differed from those observed elsewhere. In that country the utilization of potential family labour had already been taken very far by the beginning of the period under review, and little scope existed for further expansion in the early 1950s, when the overall activity ratio was also influenced by the arrival of the large post-war birth cohorts which inflated its denominator. Demographic factors must also have contributed to the apparent increases in the activity ratios of the following years — particularly in the early 1960s, when a considerable drop in the birthrate coincided with the increased intake into the labour force of the large postwar generations.[114]

Third, in some countries — notably the Soviet Union, Poland, and to a lesser extent Hungary — the relatively modest rates of expansion of real wages of wage-earners recorded during the period of their last long-term plans (ending in 1965) are shown to have been compensated in large measure by the increases in the ratio of wage-earners in the family. The extent to which this happened can be gauged by comparing columns 1 and 2 of Table 7.16 and (for Poland) from the information in footnote 111.

It was shown above that in all planned economies a large part of wage-earners' total income — about one fourth in the early 1960s — is obtained from sources other than direct remuneration for work. It follows, therefore, that the analysis of trends in the living standards of wage-earners (and *a fortiori* of relative levels) needs to take into consideration relative changes in the incidence of these sources of additional income over time.

Series of data on changes in per capita real incomes of wage-earners are available for four countries: Bulgaria (since 1952), Czechoslovakia (since 1955), Hungary and the Soviet Union (see Appendix Table 7.VI and Table 7.12). These series are not, however, comparable,

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[110] There are several reasons why trends in urban population may differ from those in the population dependent on wage-earners. For one thing, the latter include workers and their families on the state farms, who are not counted as urban. Secondly, many workers live in the countryside and many (though fewer) families classified as urban are engaged chiefly in agricultural activity. Moreover, demographic factors, such as a rapid increase in the number of old-age pensioners, may cause a more than proportionate rise in urban population. Again, the latter increases often through administrative decisions, and the re-classified districts may have a different ratio of wage-earners to the total population, etc. Nevertheless, not all these influences work in the same direction, and the errors are probably not big enough in most cases to invalidate the broad conclusions reached here.

[111] No comprehensive series of data on per capita wages and incomes are available for Poland. Between 1950 and 1960 census years, activity rates among persons aged 16 to 59 moved as follows in the towns:

	Both sexes	*Males*	*Females*
1950	64.8	90.2	44.2
1960	78.4	91.0	52.3

Source : Ekonomista, No. 2, 1965, p. 279.

According to Mr. S. Jedrychowski, the Chairman of the State Planning Commission, the overall economic participation rate (all ages) outside agriculture rose from about 40 per cent in 1960 to 43 per cent in 1965. During this period per capita incomes of wage-earners and their dependants increased by 18 per cent, compared with an 8 per cent growth of real wages per wage-earner. (*Gospodarka Planowa*, No. 7, 1966, pp. 6-7.)

[112] See, however, footnote 67 on p. 32.

[113] Between the two census years — 1956 and 1965 — activity rates of the population dependent on workers and employees rose from 45.6 per cent to 49.9 per cent. (*Returns of the 1 December 1965 Population Census in the People's Republic of Bulgaria. Three per cent advanced sample tabulations*, Sofia 1966.)

[114] These demographic factors, affecting activity rates *via* their impact on the age composition of the family, must have also been important in Hungary and in Poland. In the former country the number of births dropped from 223,000 in 1954 to 130,000 in 1965, whereas in the latter their number declined from a peak of nearly 800,000 in 1955 to less than 550,000 in 1965.

since they differ in coverage of total incomes, the divergencies being mostly due to different treatment of "invisible" state-provided services (such as health and education). For the Soviet series, the total income aggregate includes the total value of the social welfare fund (*"lgoty i vyplaty iz obshchestvennogo fonda"*), i.e. it comprises both the material and the wage cost of such services.[115] The Czechoslovak data also seem to be all-inclusive, but the Bulgaria data appear to exclude the non-material part of services. The Hungarian series excludes the value of unpaid services altogether.[116]

An interesting feature of income evolution that emerges from the comparison of trends in real wages per wage-earner, real wages per capita and real income per capita (Tables 7.12 and 7.16) is that, although the rate of growth of per capita wages tended everywhere to exceed that of wages per wage-earner (indicating a more than proportionate increase in activity rates), no clear and unambiguous relation can be detected for trends in per capita wages and per capita incomes. Among the four countries for which some data are available, only in the Soviet Union have non-wage incomes risen rather faster than incomes from employment over the whole period under study, and this entirely on account of the changes occurring in the years 1956-1958. In Bulgaria, Hungary and Czechoslovakia a similar relation held in the 1960s, but an opposite pattern had characterized the preceding periods. On the other hand, incomes per capita were everywhere growing faster than real wages per wage-earner.

These observations lead to the conclusion that changes in activity rates have played on the whole a more important role in the growth of living standards of wage-earners (measured by per capita total real incomes) than improvements in the incidence of non-wage incomes. This conclusion is confirmed by the calculations shown in Table 7.14 (columns 7-10), where increments in total incomes per capita are broken down into three explanatory variables: real wage per wage-earner, the activity ratio, and the ratio of total incomes to wages (see also equation (4) on p. 32).

These data indicate that — subject to a few exceptions (and the reservations made earlier) — by far the most important factor in the growth of per capita incomes of wage-earners has been the increase in average real wages per wage-earner. Over the period as a whole, the weight of this factor in the increment in per capita income ranged between some three-fourths in Hungary and the Soviet Union and nearly 100 per cent in Bulgaria.[117] The contribution of the increased activity ratio was, however, appreciable — particularly in Hungary, where it amounted to about two-fifths. For the reasons mention above, in both Bulgaria and Hungary the share of t income-to-wage ratio was negative, whereas in t Soviet Union the effect of this factor was neutral.

Marked differences can be observed between vario periods. In Bulgaria per capita incomes were increasing the 1952-1955 period almost exclusively as a result the expansion of average real wages, the contributions the other two variables being either small (the activi ratio) or negative (income-to-wage ratio). During t period of abruptly intensified activity, 1957-1959, no wage incomes were lagging behind the expansion of re wages; and the policy of encouraging the expansion employment entailed an increase in economic particip tion rates, which strongly influenced the rate of growth per capita incomes. The pattern seems to have changed the 1960s, when non-wage incomes increased somewh faster than wages, although both rose only marginal (see, however, footnotes 67 on p. 32 and 113 on p. 4

The expansion of per capita incomes in Hunga (where transfers in kind are excluded) in the early 195 was largely associated with more intensive utilization labour reserves, the contribution of changes in avera real wages being quite small and offset by the negati influence of the third variable. Policies immediate after 1956 were mainly directed at securing improvemen in real wages per wage-earner as a means of raisi living standards; the growth of "other incomes" (large social benefits) continued to lag behind the increase wages. Changes in average wages were also the mo important factor in the 1960s, but in this period t contributions of the other two factors were by no mea insignificant, accounting jointly for about one-fourth the total increment.[118]

In the Soviet Union both the activity ratio and t ratio of total incomes to wages remained almost consta in the early 1950s, but the increase in the latter fact was important in the 1956-1958 period, mainly on accou of radical improvements in social security benefits. Ov the period of the Seven-year Plan, however, this rat changed only a little, whereas the increase in the activi ratio was responsible for about one-third of the increme in per capita income.

The data available for Czechoslovakia for the yea 1955 to 1964 indicate that the rapid growth of per capi incomes from all sources during the 1956-1960 peri came chiefly from the fast improvement in average wag and, to a much smaller extent, from the recruitme of additional family earners to the labour force. To certain extent this was also true in the early 1960s, b total incomes then rose rather faster than wage income in contrast to the previous trend.

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[115] The index of total real incomes of wage-earners, which is also available for some years, includes the material part of state-provided services only, but is calculated on a *per wage-earner* rather than on a *per capita* basis.

[116] An all-inclusive series is available since 1957 only.

[117] However, the Bulgarian series begins in 1952, and it is not unlikely that in the pre-1952 period the activity rate and income-to-wage ratio grew faster than average real wages.

[118] For the 1961-1965 period an "all-inclusive" index of to incomes (including the value of state-provided services) is availab for Hungary. It shows a rate of growth over the period virtua identical with that obtained from the more restricted ind incorporated in the tabulations reproduced here.

7.5. PEASANT INCOMES: COMPOSITION AND TRENDS

The composition of peasant incomes has undergone ar-reaching changes in eastern European countries luring the period under study, following the more or ess gradual transformation of the institutional framework f the agricultural sector in the direction of a collectivized ystem everywhere outside Poland.[119]

The eastern European peasant traditionally derived he bulk of his income from working a privately held iece of land, either in the form of "self-consumption" r from the sales of his surplus products within and utside the agricultural sector, and/or from payment for ervices rendered within that sector. Except in the two ountries of the area which had already reached an advanced stage of industrialization at the beginning of the period — eastern Germany and Czechoslovakia — the incidence f other categories of incomes, such as income from non-agricultural pursuits and from social transfers, was sually comparatively unimportant.

Characteristic features of the evolution of the income tructure as collectivization of agriculture has proceeded ave been, on the one hand, the introduction of a dual ncome from agricultural activity — one from the collective nd the other from the individual private plot of land; nd, on the other hand, the greatly increased importance f other sources of income, particularly from non-agricultural employment and from the social consumption und of the collective farms or the state.

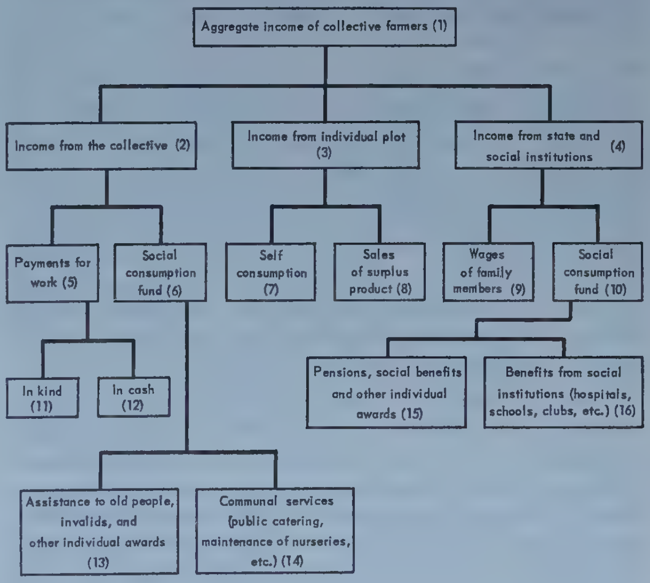
Chart 7.8 shows the main categories and sub-categories f the aggregate income of peasants in a collectivized ystem of agriculture. Some of the problems of measuring he size and structure of these incomes are similar to hose encountered in the market economies. Some others, argely those associated with the complexity of the marketing system (compulsory procurements, contractual deliveries, free market sales) and with the concomitant multiplicity of prices, are peculiar to the collectivized ystem. The most relevant issues affecting the comparability of trends over time and between countries seem o be the following :

First, although the income from the collective (item 2 n the chart) is unambiguously defined, income from the ndividual plot is not: it may include the total volume f sales of the surplus product or only that part which eaves the agricultural sector, and for some accounting purposes only sales to the state are considered. Second, methods of calculating the net income from individual plots are not uniform. Such income may, or may not, include income spent on productive investment. These funds do not, as a rule, enter the incomes of collective farmers, so that changes in ownership may affect the share of income spent on investment. Thirdly, part of the income from both the collective and the plot is received in kind, and this raises the problems of valuation mentioned in an earlier section. Fourthly, as with wage-earners' incomes, problems of the coverage of the income from the social welfare fund (item 10) arise. In particular, social benefits in kind (item 16) may be excluded altogether, or included in part (material cost), or *in toto*. The same difficulty is met in respect of the treatment of expenditure on social services by the collective farm itself. Finally, given the important incidence of mixed peasant-worker households, the question of the definition of the peasant household becomes both complex and relevant, and adds to the notorious difficulty of defining agricultural employment in general.

Given the difficulties of measurement, due partly to the complexity of the structure of farmers' incomes and partly to the rapid transformation of these structures caused by collectivization, it is perhaps not surprising that the available data on the composition and trends in peasants' personal incomes in eastern Europe are scarce, divergent as between countries, and rarely comprehensive — particularly for the earlier years of the period under study.[120]

CHART 7.8

The composition of total incomes of collective farmers


Aggregate income of collective farmers (1)
Income from the collective (2)
Income from individual plot (3)
Income from state and social institutions (4)
Payments for work (5)
Social consumption fund (6)
Self consumption (7)
Sales of surplus product (8)
Wages of family members (9)
Social consumption fund (10)
In kind (11)
In cash (12)
Pensions, social benefits and other individual awards (15)
Benefits from social institutions (hospitals, schools, clubs, etc.) (16)
Assistance to old people, invalids, and other individual awards (13)
Communal services (public catering, maintenance of nurseries, etc.) (14)

Source : Based on I. Pisarev (ed.), *op. cit.*, p. 52.

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[119] For changes in the land ownership structure over the period 1949-1960, see the SURVEY for 1960, Chapter IV, p. 5. By 1962-1963 he distribution of cultivable land outside the state farms was as ollows *(percentages)*:

	Collective farms	*Individual plots*	*Private farms*
Bulgaria	89.4	9.5	1.1
Czechoslovakia . . .	80.4	5.6	13.9
Eastern Germany . .	81.7	11.3	7.0
Hungary	83.7	11.4	4.9
Poland	1.3	—	98.7
Rumania	86.3	9.5	4.2
Soviet Union	98.2	1.8	—

Sources: Derived from *Economic Planning in Europe, op. cit.*, Chapter VI, Table 3.

[120] For the Soviet Union where — except in the newly acquired territories — collectivization was completed before the war, an index of real incomes of peasants is available for the whole period under review, but the structure of these incomes has never been published in detail.

Factors in the growth of peasant incomes[121]

In any economic system incomes from agriculture are largely a function of trends in output and in the prices paid to the farmers as producers and charged to them as consumers. As a rule, trends in output and in prices are inversely correlated in a truly competitive market — diminished supply pushing prices up and increased supply forcing them down. However, for the bulk of agricultural output in the planned economies there is no such built-in equilibrating mechanism.[122] Indeed, the compulsory quota system of deliveries, which obtained to a varying degree in all the countries of the area for at least part of the period, tends to produce an opposite effect, since a good harvest permits the peasant to sell a greater proportion of his output at a (usually) much higher price. More generally, the diversity of marketing forms, with their different price characteristics, provides the planners with a means for controlling peasant incomes, whereas the actual pattern imposed by them in the process of plan implementation constitutes a factor in the growth of these incomes. Furthermore, in a collectivized system of agriculture the personal incomes of farmers are to a large and growing extent a function of the policy pursued by the collective (from which the peasants derive a significant part of the total income) in distributing its net revenue between investment and consumption; and such policies are usually influenced by the central authorities.

It will be seen in the brief country-by-country review of trends in peasant incomes in the following pages that these influences have been of varying strength in the countries considered during the postwar period, partly because of changing policies regarding the desired pattern of output and income in the agricultural sector, partly because of the search for the most efficient instruments for implementing the planners' desiderata.

The Soviet Union

During the 1951-1965 period real incomes of peasants[123] computed "per working peasant" rose by some 170 per cent, or by nearly 7 per cent a year at compound rates. This high rate of growth was significantly greater than that achieved by wage-earners, but the gap would be narrower in terms of per capita changes (which better illustrate trends and differences in living standards), since wage-earners' families have also benefited from an increase in the economic activity ratio, whereas the opposite is probably true of peasant families.

A notable feature of the growth of peasant income during the period has been the fact that it owed as much to changes in the mode of marketing of agricultural produce as to direct manipulation of the relative input-output prices and the agricultural terms of trade in general. Two reforms, which took place in 1953 and 1958 respectively, stand out as landmarks in this evolution.

Before 1953 the combination of a high share of co pulsory procurement in the total marketed output, low delivery prices, and of restrictions on the use private plots held down the level both of incomes collective farms and of the personal incomes of the members. The reform begun in 1953 relied both on t lowering of compulsory delivery quotas and on pri increases for state deliveries as a means of raising t revenue of collective farmers. In the first stage of t reform prices rose most rapidly for deliveries of anim products, especially those of slaughter animals, b subsequently much more favourable terms were als offered for deliveries of grain and potatoes. By 195 prices paid for all state deliveries (against cash) were c average 2½ times above the 1952 level; and among the those for grains increased by more than 6 times and tho for animal products by nearly 4 times.[124] Largely as result of these adjustments, producers' gross cash receip from state deliveries increased by some 25 per cent i 1953, and were by 1956 nearly three times higher tha in 1952. Institutionally, the 1958 reform was more fa reaching, inasmuch as it abolished compulsory deliveri from private plots altogether, and replaced the multip price system previously applied to state deliveries b unified prices differentiated only by region. On the whol price adjustments introduced in the wake of this refor were, however, more modest than those incorporated i the earlier one, contributing to a rise of about 18 per cen in the producers' price level in 1958 compared wit 1956.[125] An important part of the reform was the abolitio of the Machine-Tractor-Stations (MTS) and the disappearance of the payments in kind for services they rendere to collective farms. The MTS sold their equipment t collective farms and a large part of the greatly increase gross revenue of the latter was earmarked for the repayment of the ensuing debt.[126]

Between 1954 and 1958 real peasant incomes rose b 32 per cent,[127] compared with a growth of per capit real wages of only 11 per cent. By the later date a larg proportion (about one-fourth) of all collective farms ha apparently reached a level of remuneration at lea equal to that of the average state farm; consequentl some measures were adopted by the 1958 and 195 December Sessions of the Party Plenum to slow down th rate of expansion of peasant incomes. Some restrictio were introduced on the number of animals permitted t

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[121] For a discussion of determinants of peasant incomes, see also Chapter 8, section 8.6.

[122] The exception is sales on the free collective or peasant markets, consisting mainly of some animal products, fruit and vegetables.

[123] In the Soviet Union, this concept includes incomes from all sources, comprising also the material part of social services in kind.

[124] For further details see Table 18 in the SURVEY for 196 Chapter IV. The same source provides also some estimates for th derivation and utilization of collective farms incomes during th 1950s. (Tables 19 and 20.)

[125] By far the most important revision was in the prices for catt for slaughter.

[126] These measures helped the process of monetization of peasa incomes which was manifested in the continuous increase in th share of cash receipts for work on the farm (*percentages*):

1953	*1958*	*1959*	*1960*	*1961*	*1962*	*1963*
33.9	56.6	58.6	60.2	60.9	64.7	73.6

Source: V. Morozov, *Voprosy ekonomiki*, No. 7, 1965.

[127] A contributory factor in this growth must have been the esta blishment — at a higher level of farmers' personal income — new collective farms in the eastern regions as part of the virgi lands campaign.

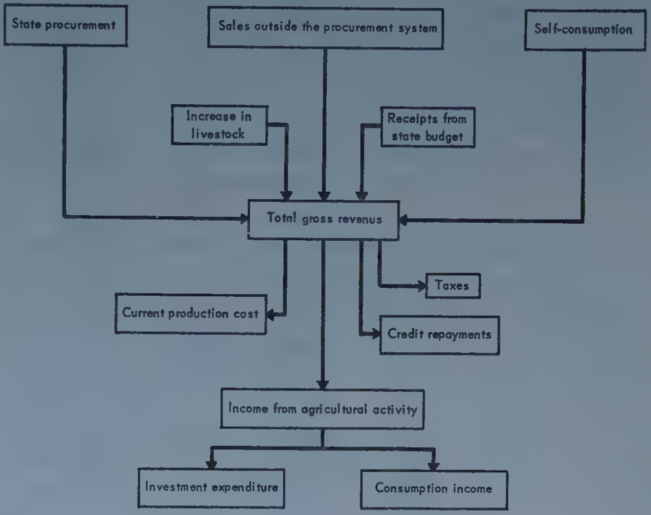
private ownership, and transfers of livestock to collective ownership were encouraged; and some procurement prices, particularly those for cotton, wool and tropical food, were brought down closer to the levels obtained by state farms.[128] This, combined with the poor or mediocre output during the two following years and the burden of repayments for MTS transfers, held down the expansion of peasant incomes during the first two years of the Seven-year Plan. The trend showed some improvement in 1961 and 1962, when real incomes grew by some 5 per cent a year. These gains were largely due to the measures taken at the beginning of 1961 to improve the financial resources of collective farms. These included some reductions in prices of non-agricultural inputs (such as means of transport and petrol), an almost complete abolition of income tax on incomes generated by sales of meat, milk and eggs, and some improvement in credit facilities and obligations. In 1962, however, collective farms' gross incomes were augmented by steep increases in the prices paid by the state to farmers for meat and butter deliveries, the average level of the former going up by some 35 per cent, and of the latter by 10 per cent.[129] As the full impact of these increases was transferred to the — largely urban — consumer, the net result was some re-distribution of real incomes between the farm and the non-farm population in favour of the former.

The disastrous harvest of 1963 probably caused some decline in the level of peasant incomes in that year (no index number has as yet been published), but the recovery of output in the last two years of the Seven-year Plan and the introduction of further measures designed to increase the material interest of farmers in the expansion of agricultural production resulted in noticeable gains.

Thus, the last year of the Seven-year Plan saw a further radical revision of official policies concerning cost-revenue relations in agriculture. The March 1965 Plenary Session of the Party took decisions reducing and stabilizing over a period of five years the planned volumes of state deliveries of the principal grains and animal products. At the same time, considerable price increases were granted, particularly for above-plan deliveries of these products, differentiated markedly between regions. The bulk of the farms' outstanding debts to the state was cancelled and important tax reliefs were granted; and some restrictions on livestock ownership were lifted.[130] Further gains to the peasants followed the extension of the old-age (and other pensions) schemes to collective farms, partly financed by the state. Most of these measures came into effect only in the course of 1965 and had therefore only a partial impact on the level of incomes in that year. Nevertheless, peasant incomes rose in 1965 by about 12 per cent,[131] thus contributing greatly to the over-fulfilment of the Seven-year Plan targets. The plan anticipated an increase over the seven years (1959-1965) of 40 per cent, but the actual rise was in the region of 50 per cent, in marked contrast to the evolution of average wage-earners' incomes.

CHART 7.9

The formation and the composition of peasant income from agriculture in Poland



Source: E. Gorzelak, *op. cit.*

Eastern Europe

Poland occupies a unique place in eastern Europe with regard to the structure of land ownership, having retained — outside a sizeable state farm sector — an essentially private small-holder type of agriculture.[132] Nevertheless, the state has imposed — on a relatively small part of agricultural produce — a compulsory system of deliveries at centrally determined prices, and, in addition, has reserved for itself monopsonistic rights for a considerable part of this product. This land ownership pattern and the nature of peasant-state transactions are responsible for a formation and composition of peasant incomes peculiar to Poland and differing from that encountered in other centrally planned economies (see Chart 7.9).

Although Polish statistical series on peasant incomes are relatively untouched by the consequences of the institutional transformations that occurred in the other countries of the area during the period under review,

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[128] See the SURVEY for 1959, Chapter II, section 1.

[129] This increase was largely due to the desire to encourage expansion of output, as the earlier reforms had failed to bring the average prices of most animal products up to the level sufficient to cover average production costs.

[130] See the SURVEY for 1965, Part 1, Chapter I, section 3.

[131] An important part in this increase was played by the changed policy of collective farms with regard to the distribution of their net revenue between investment and consumption. In the past there had been a tendency for the total receipts of collective farms to increase much faster than their payments to collective farmers. For instance, in the 1954-1958 period payments for *trudo-den* (work-day) increased by 35 per cent, but the total farm revenues (per collective farm) by 52 per cent (B. Tresomkova, *Vestnik statistiki*, No. 8, 1965). The gap was probably still wider in 1962 and 1963, when expansion of agricultural investment was the avowed objective of price increases granted to collective farms for their deliveries. But in 1965, the farms' revenue and the payments to the members were reported to have increased by the same amount, 16 per cent.

[132] In 1962 state farms held 12.4 per cent of the cultivable land and collective farms 1.1 per cent. In 1956 — at the peak of the socialization of Polish agriculture — co-operative farms owned about 10 per cent of agricultural land.

TABLE 7.17

Indicators of trends (in real terms) in total peasant incomes

Index numbers, 1955=100

Country and coverage	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria																
Total incomes (per capita) [a]	..	..	90.3	..	..	100.0	96.3	115.0	136.7	154.6	153.8	154.8	177.9	193.8	194.5	218.4
Czechoslovakia																
Total incomes of all farmers (per capita)	..	..	..	..	..	100.0	..	..	114.1	..	129.8	137.5	137.0	136.4	144.1	..
Total incomes of co-operative farmers (per capita)	..	..	..	..	..	100.0	..	..	100.8	..	111.5	118.9	118.6	117.7	125.1	..
Total incomes of private farmers (per capita)	..	..	..	..	..	100.0	..	..	111.3	..	118.3	112.2	107.4	108.3	..	..
Hungary																
Personal consumption (per capita) [b]	90.5	95.4	85.6	80.8	88.4	100.0	105.4	110.0	110.2	123.1	129.7	126.5	131.4	135.3	143.2	146.2
Personal consumption incomes (per capita) [c]	86.4	100.1	56.1	91.2	93.2	100.0	97.1	112.1	103.1	114.0	112.8	117.0	124.9	133.5	143.3	142.0
Poland																
Total incomes of peasants from agricultural activity	..	..	..	..	..	100	115	121	124	121	127	142	121	134	136	145
Consumption incomes [d]	..	..	..	..	..	100	113	119	122	120	128	133	132	130	137	143
of which : non-productive investment	..	..	..	..	..	100	107	150	183	187	187	188	182	197	223	227
Productive investment	..	..	..	..	..	100	150	226	245	263	251	289	271	286	303	327
Rumania																
Total incomes of peasants [a] (per capita)	59	..	63	..	82	100	84	110	92	108	109*	..	..	..	..	..
Soviet Union																
Total incomes of peasants (per working peasant) [e]	67	73	79	89	93	100	108	115	123	123	126	133	139	..	160*	179*

Sources: See Appendix Table 7.VI.

[a] Presumably includes the material cost of state-rendered services.

[b] Excluding state-rendered services in kind and changes in private assets.

[c] Excluding state-rendered services in kind.

[d] Including non-productive investment and change in cash holdings.

[e] Including the material cost of state-rendered services.

he absence of collectivization has to a certain extent dversely affected the reliability of income statistics, which have come to rely largely on sample inquiries.[133] Two other related features of Polish statistics need to be borne in mind. First, the official index of peasant ncomes, available since 1955, is restricted to incomes from agricultural activity only.[134] This is a grave shortcoming for the historical study of a period during which peasant incomes from other sources, particularly from employment, are known to have risen relatively fast.[135] Second, partly because of the difficulty of relating this ole source of income to a definite employment category, he index refers to aggregate income without taking into ccount changes in the size of employment or of the population dependent on agriculture.

Virtually no information is available on trends in peasant incomes before 1955 (see section 7.3 above). Over the years 1955-1965, which cover two Five-year Plan periods, agricultural incomes rose by 45 per cent, but the rate of their expansion was much slower in the atter of the two quinquennia (see Table 7.17).[136] Particularly sharp improvements occurred in 1956-1957, and o a lesser extent in 1960 and in the last two years of he Second Five-year Plan. In the years 1958-1959 and 1961-1963, on the other hand, the level of peasants' real incomes was stable or even declined slightly.

During the 1956-1965 decade the value of gross receipts (including consumption in kind) almost exactly doubled. t can be seen from Table 7.18 that the most dynamic element of this development was sales to the state, the value of which nearly tripled over the period. Sales on the free market were expanding more slowly — particularly, t seems, in the 1950s. Consumption in kind, which in 1955 was responsible for about 45 per cent of total gross revenue, rose by about 50 per cent over the decade, but by 1965 its share had fallen to about one-third of the otal.

In 1956 and 1957 an important factor in the growth of real peasant incomes consisted in the upward adjustment of prices and the reduction in the quotas of compulsory deliveries. In 1955, the "price difference for compulsory deliveries" (i.e. the difference between marked prices and those actually paid to the producers for compulsory deliveries), which is usually considered as a tax-levy, amounted to about 20 per cent of total current production expenditure, but had declined to 8 per cent by 1957.[137] In general, according to Zienkowski's semi-official estimates,[138] the increase in output was responsible for about 60 per cent of the increment in peasants' real incomes from agriculture during the 1956-1960 period, the residual being due to improvements in the terms of trade and in the system of compulsory deliveries:

Factors in the growth of real peasant income in Poland (1955-1960)

Factor	*Increment in billion zlotys*	*Agricultural activity*	*All incomes*
		(Percentages)	
Net output (including depreciation)	+ 9.5	61	53
Terms of trade	+ 2.4	15	13
Reduction of compulsory deliveries	+ 4.4	28	24
Net credits	+ 0.5	3	3
Taxes (outside compulsory deliveries)	— 1.3	— 7	— 7
Total of income from agriculture	+ 15.5	100	86
Other factors and non-agricultural income	+ 2.5	..	14
Total income	+ 18.0	..	100

Source: L. Zienkowski, *op. cit.*

It is clear that in the 1960s peasants' real incomes moved largely in parallel with the fluctuations of agricultural output. The landmarks were the outstandingly good year of 1961 (followed by a slump in 1962), and the very good performance of the sector again in 1965. Between 1960 and 1964, the terms of trade moved as follows:

	1961	*1962*	*1963*	*1964*	*1964*
	Preceding year = 100				*1960 = 100*
Producers' prices [a]	102.3	106.7	98.8	100.5	108.3
Consumers' prices [b]	101.1	102.0	102.1	101.6	107.0
Terms of trade	101.2	104.6	96.8	98.9	101.2

Source: Z. Kozlowski and M. Brzoska, *Gospodarka Planowa*, No. 11, 1965.

[a] On the basis of a changing marketing structure; according to the source, the alternative calculation on the basis of an unchanged structure gives similar results.

[b] Including productive inputs, the average price of which rose by 38 per cent between 1960-1964.

It seems that a marked improvement in the peasants' terms of trade occurred in 1965. Over the 1961-1965 period the price index of sales is reported to have risen by 15-16 per cent at a constant structure of marketing and by 11-12 per cent at a changing structure, whereas the index of goods and services acquired by the peasants increased by only 7 per cent, irrespective of the assumption about the structure of purchases.[139] The changed policy of the Polish Government in 1956 with regard to the institutional framework of the agricultural sector had some important repercussions on the expenditure structure of total peasant incomes. The data in Table 7.17 indicate a growing share of both non-productive and productive investment. The latter was more than twice as large in 1957 as in 1955, and had nearly tripled by 1961; and after a few years of relative stagnation there was a further upsurge in 1965.[140]

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[133] "The unreliability of the statistical material does not allow for a ully developed and documented assessment of the evolution of the evel and structure in the living standards of the agricultural population. The chief source of information is a sample inquiry carried out by the Institute of Agricultural Economics, the nature of which s such as to warrant caution in drawing conclusions and in making generalizations." A. Karpinski, K. Secomski and Z. Zekonski, *Problemy Rozwoju Gospodarczego Polski Ludowej 1944-1964*, Warsaw 1965, p. 129.

[134] But it includes apparently all incomes from such pursuits, ncluding those accruing to the non-agricultural population. E. Gorzelak, *Dochody ludnosci rolniczej w Polsce w okresie 1955-1960*, Warsaw 1963, p. 38.

[135] According to I. Frenkel and Z. Zekonski, *Zagadnienia konomiki rolnej*, No. 5, 1964, p. 54, in 1960 about 8 per cent or .3 million persons in total population in the country, who in official statistics are counted as agricultural population, had a ignificant complementary income from employment.

[136] The official series show that, apart from the year 1962 when rain and potato inventories declined in volume and the rate of rowth of livestock slowed down, and the following year when a ompensatory movement set in, total incomes increased *pari passu* vith consumption income.

[137] Zienkowski, *op. cit.*, p. 255.

[138] *Op. cit.*, p. 270.

[139] According to *Wiadomosci Statystyczne*, No. 9, 1966, p. 33.

The coverage of statistics on farm incomes has widened in *Hungary* since 1957, when a new series on total peasant incomes from all sources was introduced. For the whole period under study, however, two somewhat restricted series of data are available, referred to as "personal consumption" and "personal income", neither of which includes social benefits in kind ("state-rendered services"). As the difference between the two aggregates consists in the exclusion from the former of changes in stocks and in private assets, their trends have diverged whenever marked fluctuations in agricultural output have occurred — and also during the collectivization drives, when the transfer of peasant assets to collective ownership resulted in a momentary inflation of consumption levels. Over the whole 1950-1965 period, however, the two indices, expressed in real per capita terms, rose by the almost identical amount of around 61-62 per cent (see Table 7.17), or at an average rate of 3.2 per cent a year. Apart from the almost complete cycle of the 1949-1953 period, when incomes rose first very steeply only to slump back in 1952-1953 to the previous levels, and from the minor setback of 1961, the per capita consumption of Hungarian peasants has increased fairly rapidly and steadily.

Between the two population census dates — 1949 and 1960 — the agricultural population declined by about 20 per cent, and a further fall of about 10 per cent occurre in the 1960s. This means that over the 15-year period th per capita net output of agriculture rose by some 40-45 pe cent,[141] compared with a more than 60 per cent increas in the per capita consumption income of peasants. Thes are approximative and not strictly comparable figure but the size of the divergence lends credence to th hypothesis that the policy of improving the terms of trad for the agricultural sector has been a major factor in th growth of peasant incomes over the whole period unde study. Indeed, the available data indicate that whereas th price index of goods and services acquired by the peasan (including goods for productive purposes) rose by aroun 70 per cent over the whole period, the average level o prices paid to them for their deliveries more than triple A more detailed analysis shows that the trend in thes price relatives has undergone two distinct phases. I the early 1950s (specifically, between 1949 and 195 consumers' prices rose rather faster than producers prices, causing a deterioration in the terms of trade But between 1953 and 1965 the former hardly rose wherea the level of the latter doubled.[142]

At the beginning of the period about 60 per cent of th net personal consumption income flowed from th consumption of farms' own produce, and less than 10 pe cent from wages earned by the peasants from non-agricu tural activities. The data in Table 7.19, although partl estimated and referring to values at different prices nevertheless point to a clear tendency for the relativ weight of self-consumption to decline and for that o wage-income and, to a lesser extent, of agricultural mone income to expand during the 1950-1964 period. At th later date, the share of money income from agricultura activities was somewhat higher than that of consumptio

TABLE 7.18

Peasant incomes from agricultural activities in Poland, 1955 to 1964

Billion zlotys

Component	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Total gross income [a]	66.1	76.8	86.2	93.6	95.9	102.9	110.4	113.1	113.3	120.7
Sales to the state	25.5	31.1	40.4	47.3	48.8	51.2	58.9	59.3	58.9	63.7
Sales on free market	11.0*	12.2*	11.6*	11.4*	11.7*	14.3	13.8	15.2	15.8	16.4
Consumption in kind	29.6	33.5	34.2	34.9	35.4	36.5	37.7	38.6	38.6	40.6
Less: Current production expenditure	8.4	9.4	11.0	13.1	14.7	15.9	17.0	18.0	19.7	22.0
Taxes and fees	4.6	4.2	4.7	6.1	6.8	6.9	7.2	7.9	8.0	8.2
Total net income [b]	53.1	63.3	70.4	74.4	74.3	80.1	86.2	87.2	85.6	90.5

Sources: National statistics; *Gospodarka Planowa*, No. 11, 1965.

[a] Excluding changes in stocks and in livestock.

[b] Net of production expenditure and taxes, gross of depreciation.

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[140] In 1964 total investment expenditure amounted to nearly 10 per cent of net income and was about evenly divided between productive and non-productive purposes. Within consumption, expenditure on goods and services was somewhat greater than the value of consumption in kind. See Kozlowski and Brzoska, *op. cit.*, p. 42.

[141] The 1961-1965 average was about 10 per cent above the 194 1954 average.

[142] The changes in the average level of producers' goods price were, of course, significantly affected by changes in the pattern o marketings, this being an important planning tool for influencin price levels and incomes.

TABLE 7.19

The structure of personal consumption income [a] of peasants in Hungary, 1950, 1957 and 1964

Percentages

Component	1950	1957	1957	1964
	At 1954 prices		At 1959 prices	
Personal consumption income [a]	*100.0*	*100.0*	*100.0*	*100.0*
of which:				
Gross money receipts from sales of agricultural products, labour-day dividends in co-operative farms, and other	..	60.5	57.2*	59.2*
Less : Taxes and current expenditures on farming	..	23.2	20.7	16.7
Net money income from agricultural activity	32.5	37.3	36.5*	42.5
Wage income outside agriculture	7.9	11.3	12.5*	17.0
Self-consumption at market prices	59.6	51.4	51.0	40.5

Sources: National statistics.

Incomes exclusive of social benefits in money and in kind, and of changes in private assets.

ach being responsible for about 40 per cent of total onsumption income; at the same time the share of wages vas twice as large in percentage points as in 1950.

Over the 1950-1958 period it is possible to relate year-o-year changes in consumption income to those in its onstituents (see Table 7.20). It is interesting to note hat the 1949-1951 increase in consumption income esulted solely from the increase in agricultural income both in cash and in kind), whereas real incomes from mployment declined, as they did in wage-earners' amilies.[143] The contrary happened in 1952-1953, when vage incomes rose rapidly but on-farm consumption leclined. Between 1954 and 1956 all three components ncreased, but in both 1957 and 1958 the real money eceipts from agricultural activity declined a little.

Between 1960 and 1964 total consumption income ncreased more rapidly than personal consumption income, s social benefits in cash and in kind (see Table 7.21) onstituted the most dynamic category of income. This endency represented an important element of the post-collectivization policy aiming at bringing conditions on the farms nearer to the standards enjoyed by urban workers. By 1964, the share of such benefits in total farmers' income amounted to 19 per cent, compared with about 25 per cent among the wage-earners. Among other features of the 1960-1965 evolution was a further decline in the share of the value of product consumed on the farms, and an increase in the importance of cash incomes in general.

The monetization of peasant incomes was a by-product of collectivization and is shown in the following figures (*billion forints*):

	1960	*1961*	*1962*	*1963*	*1964*
Money receipts from the collective	1.6	2.5	3.8	5.8	6.6
Sales of produce	8.4	6.9	6.9	5.2	5.6
Total agricultural money income	10.0	9.4	10.7	11.1	12.2

Sources: National statistics.

The actual decline in the value of sales is a reflection of a shift in the nature of payments by the collective to its members from "in kind" to "in cash" distribution.

TABLE 7.20

Trends in per capita real consumption incomes of peasants by source, Hungary, 1950 to 1958

Percentage change from preceding year

Component	1950	1951	1952	1953	1954	1955	1956	1957	1958
Personal consumption income	12.7	5.4	— 10.3	— 5.6	9.3	13.2	5.4	4.3	0.2
Net money income from agricultural activity	20.1	—	— 25.4	21.3	14.5	26.8	9.5	— 2.7	— 6.3
Self-consumption	11.2	11.5	— 4.7	— 20.6	7.1	5.3	0.7	9.1	4.3
Wage income	— 2.0	— 19.0	9.1	37.0	14.1	1.8	14.0	8.8	7.7

Sources: National statistics.

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[143] There was apparently little change in the number of peasants earning wages, as many peasant families were reclassified into the wage-earners' category during these years.

TABLE 7.21

The structure of total consumption income [a] of peasants in Hungary, 1960 to 1965

	Percentages		Percentage change from preceding year per capita				
	1960	1964	1961	1962	1963	1964	1965
Income in cash	50.0	52.7	1.8	10.6	7.1	12.8	..
of which: sales of agricultural produce, labour-day dividends, etc.	32.4	34.9	3.2	14.0	7.3	13.2	..
social benefits	2.9	4.6				5.5	..
wages outside agriculture	14.7	13.9	−1.5	2.2	6.7	14.2	..
Income in kind	50.0	47.3	6.8	4.1	7.8	1.8	..
of which: social benefits	12.7	14.1	8.3	10.9	10.9	7.2	..
self-consumption	37.3	33.2	6.3	1.7	6.6	−0.3	..
Total consumption income	100.0	100.0	4.3	7.3	7.4	7.3	..
Total income (including changes in private assets and cash-holdings)	..	..	−1.2	4.9	4.1	6.0	2*

Sources: National statistics.

[a] Inclusive of social benefits in cash and in kind.

On the other hand, in the 1960 period the proportions of incomes derived from the collective and from the private plot remained practically unchanged:

Income per family of collective farm members
(Thousand forints)

	Collective	*Private plot*	*Total*
1960	8.4	8.6	17.0
1961	7.8	9.3	17.1
1962	9.0	9.6	18.6
1963	10.0	10.1	20.1

Source: A nemzeti jövedelem és a lakosság életkörulményei, 1963.

With labour productivity virtually unchanged, but some visible improvements in the terms of trade,[144] farmers' per capita income probably rose somewhat in *Czechoslovakia* between 1953 and 1955; but in the absence of a synthetic indicator of change no firm conclusions can be drawn concerning trends in the living standards of the Czechoslovak peasantry in the early 1950s. The index of real peasant incomes per capita, with 1955 as a base, has only recently been published and supplemented by complementary data which throw some light on trends in peasant income over the 1956-1965 decade.[145]

The index, which encompasses all sources of income, including social benefits in cash and in kind, shows a 44 per cent gain between 1955 and 1964 — the equivalent of a 4.1 per cent annual increase on a compound interest basis. It is plain from inspection of Table 7.17 that by far the largest part of this improvement took place between 1955 and 1960-1961, when these incomes were growing fast, at a rate exceeding 6 per cent per yea compared with one of less than 2 per cent per year in th 1960s.

Another conclusion which emerges clearly from comparison of the data assembled in Table 7.22 is that a majo contributory factor to the growth of per capita income over the decade has been a decline in the size of the agricu tural population. Given a relatively modest increase i agricultural output over the period, the fall by abou one-third in the size of the agricultural population goe a long way towards explaining the observed 45 per cen rise in per capita incomes. Over the decade as a whol there was also a distinct improvement in the price relative of producer- and consumer-goods. By 1965 the level o state delivery prices stood at some 50 per cent above th 1955 average, whereas the peasants' cost-of-living inde was somewhat below the mid-1950s figure. The data i Table 7.22 show, however, that most of the improvemen in procurement prices took place between 1958 and 196 i.e. resulted from the abolition of compulsory deliverie As these were also the years of a substantial decline in th agricultural population, the combined effect of the tw factors pushed up the level of per capita real income by more than 20 per cent over the three years. The trend shown in Table 7.18 indicate that the main beneficiari in this period were collective farmers and those privat farmers who joined the collective.[146]

As in most other countries of the area, the transformation of the structure of total peasant incomes in Czech slovakia tended in the direction of a diminishing share

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[144] Due to a rise in prices for compulsory procurements of some 13 per cent, and a reduction in quotas at a time when cost of living apparently fell by a few percentage points.

[145] However, the years 1956, 1957 and 1959 have been omitted from the series.

[146] Per capita income of all agricultural households grew mu faster than those of the two main sub-groups separately, indicati a structural shift towards the higher income group. The per capi money incomes of collective and private farmers were as follo (Kčs per year):

	1958	*1960*
Collective farmers	4 789	5 748
Private farmers	3 844	3 905

Source: Statistical yearbooks.

n-farm consumption in kind and an increasing share of oney incomes:

Composition of total incomes of agricultural households

	Percentages 1955	1960	1963
Money incomes [a]	50.7	62.7	65.0
Self-consumption	37.2	26.2	21.9
Unpaid services	12.1	11.1	13.1

Source: *Statistika*, No. 8, 1965.

[a] Including wages and some other minor incomes in kind, private accumulation and depreciation of family houses.

Within the collectivized sector there has been a tendency or the share of money income received by the collective arm members from the collective to rise, as illustrated y the following data referring to total incomes (excluding e value of unpaid services):

Structure of total net incomes of collective farmers' households

	Percentages 1958	1962
otal net income [a]	*100.0*	*100.0*
Income from work	86.8	85.0
Money incomes from co-operatives	40.4	53.8
of which: labour-day dividends	38.3	47.5
Sales of agricultural products	12.7	5.7
Wages	8.5	8.4
Consumption in kind	25.2	17.1
Other income	13.2	15.0
Social benefits	4*	4.5*
Savings withdrawals	8*	9.2
Other	1.2*	1.3*

Source: *Planované hospodářstvi*, No. 1, 1964, p. 66.

Excluding transfers in kind.

The system of social security, introduced for collective armers in 1962, was further expanded in coverage and n scope in 1964, bringing the social benefits rates of armers (particularly of those in the "advanced" farms) earer to those of wage-earners.[147] Accordingly, the share f social transfers in total peasant incomes must have ncreased by the mid-1960s, but the data on the composition of agricultural households' incomes have not as et been published for 1965.

The sharp fluctuations of agricultural output in the early 1950s in *Bulgaria* must have entailed parallel changes in peasants' nominal incomes, but little is known about the movement of prices in these years.[148] The index of per capita real incomes of peasants, available annually since 1956 with 1952 as a base, shows a very modest increase of 6.6 per cent during the 1952-1956 period as a whole, when per capita agricultural output grew by about the same margin. As mentioned in section 7.3, the income policy of that period favoured wage-earners, whose per capita real incomes rose by about 50 per cent. But the year 1956 marked a turning point in this policy. From then on, modifications in the compulsory delivery quotas, and price increases granted to the producers which culminated in the establishment of a single-price procurement system in 1959, greatly augmented the real incomes of peasants.[149] At the same time peasants also benefited from increases in non-agricultural categories of incomes, such as wages and social benefits (see below), whereas the declining size of the agricultural population gave a further impetus to the rapid growth of per capita real incomes, which in 1959 reached a level about 60 per cent above that of 1956.

Both total and per capita agricultural output stagnated between 1960 and 1963. Nevertheless, in both 1962 and 1963 the per capita real incomes of peasants rose by some 12 per cent a year. These gains were a result of a deliberate policy of improving material incentives in agriculture, and resulted partly from a further upward adjustment of producers' prices[150] and partly from

TABLE 7.22

Trends in output, population and prices in Czechoslovak agriculture (outside state farms), 1955 to 1965

Index numbers, 1955=100

Indicator	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Gross agricultural output	100	102	101	101	100	103	102	92	109	..	..
Marketable production	100	107	110	118	111	118	124	112	129	..	..
Agricultural population	100	98	94	90	81	73	68	63	62	..	..
State delivery prices	100	106	108	109	115	140	141	142	144	149	152
Cost-of-living index of peasants	100	97	96	97	94	92	92	93	93	94	94

Sources: National statistics; *Statisticke Zpravy*, No. 3, 1963.

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[147] See the SURVEY for 1964, Chapter I, p. 42.

[148] The global value of total agricultural product was in 1951 about 40 per cent higher than in 1950, declined again by some 20 per cent in 1952, but exceeded the 1951 level by 1953 (see Appendix Table 7.I). The remuneration received by collective farmers for work in the collective was about halved in 1952 compared with 1951, and rose by some 40 per cent in the following year (see the SURVEY for 1960, Chapter VI, p. 34.)

[149] Between 1952 and 1959 the average procurement prices of wheat and beef went up by 75-80 per cent and of maize by 57 per cent; and prices of wool and sunflower seeds more than doubled (*Ikonomicheska Misl*, No. 1, 1960).

[150] Prices of most animal products were raised in 1961, by percentages ranging from 5 for milk to 20-50 per cent for most kinds of meat, and further price adjustments were granted in 1962, particularly for tobacco and grapes. As consumers, however, the farmers were adversely affected by increased price levels during these two years; their cost of living rose by 3.4 per cent in 1961 and by 6.2 per cent in 1962.

TABLE 7.23

The structure of incomes of co-operative farmers' households in Bulgaria, 1956, 1959 and 1961

Component	1956	1959	1961
	Percentages		
Total income per household [a]	*100*	*100*	*100*
Money payments from the collective	38	49	42
Sales of agricultural products	14	7	7
Consumption from own plot	24	22	25
Wages outside agriculture	15	13	17
Social benefits in cash	2	5	5
Other incomes	7	4	4

Sources: Statisticheski Izvestia, No. 4, 1959; A. Dimitrov and P. Pisarev, *Izvodi i fakti za blagosastonaieto na nashite seliani*, Sofia 1961; direct communication from the Central Statistical Office of Bulgaria.

[a] Excluding social benefits in kind.

reduced investment activity by collective farms, thus providing scope for increased payments to farm members. As a result, total investment financed by collective farms declined from 272 million leva in the peak year of 1961 to 229 million in 1962 and 221 million in 1963, and the average value of in-cash and in-kind payments to collective farmers from the collective rose from 476 leva in 1961 to 601 leva in 1962 and to 641 leva in 1963.[151] In spite of a further increase in these payments in 1964 — in line with the growth of per capita output in that year[152] — per capita real incomes of peasants apparently remained at their 1963 level, owing largely — it seems — to a decline in incomes from other sources, but a further steep rise of about 12 per cent occurred in 1965.[153]

The data presented in Table 7.23 show that in 1956 rather more than one-third of the total income of collective farmers came from the payments received from the collective as labour-day dividends, etc., and that this share went up to nearly 50 per cent in 1959 but declined subsequently. Over these years the value of on-farm consumption rose by about one-third, but its share in the total — which in 1956 amounted to one-fourth — fluctuated between 1956 and 1961. During this time, the importance of sales of surplus output from the individually held plots diminished both absolutely and relatively, whereas the value of social benefits multiplied four times, thanks mainly to the introduction of the state social security system on the collective farms in 1957.

It appears from data gathered from various Rumanian sources in previous ECE studies[154] that per capita real incomes of *Rumanian* peasants roughly doubled during the fifth decade, but that almost all of the increa occurred during the first quinquennium:[155]

Some indicators of trends in peasant incomes in Rumania

Index numbers, 1955 = 100

	1950	*1952*	*1954*	*1955*	*1956*	*1957*	*1958*	*1959*	*19*
Gross cash receipts	47	..	83	100	107	106	130	..	
Ratio of agricultural to industrial prices	..	..	100	100	113	129	127	..	
Per capita real incomes	59	63	82	100	84	110	92	108	1

Sources: See the SURVEY for 1960, Chapter IV, p. 43; the *Bulletin*, Vol. 13, No p. 91; *Revista de Statistika*, No. 5-6, 1960.

During this phase Rumanian peasants benefited fro an almost continuous increase in agricultural outp (the net value of output rose by nearly two-thirds ov the five years) and, after 1953, from lighter quotas compulsory deliveries and price improvements offer for all state procurements, including contractual deli eries.[156]

The fluctuations of agricultural output in the 195 1960 period (see Chart 7.1 and Appendix Table 7 were clearly of capital importance for trends in peasa incomes. However, the decision — taken at the end 1956 — to abolish compulsory deliveries of some cr products and milk, and of meat (for the co-operative a small individual farms), and to raise prices for abov quota meat deliveries, contributed to some improveme in the peasants' terms of trade, as witnessed by the jun of the index of price relatives of nearly 15 per cent 1957, as shown above.

Between 1959 and 1961 net agricultural output r mained fairly stable, but the 1962 decline was followe by a steady though rather slow increase until 196 There are, however, virtually no data illustrating chang in peasant incomes during the course of the Six-ye Plan (1960-1965). It has been reported that collecti farmers' receipts from the collective rose in 1965 by much as 16 per cent.[157] This might presage a new poli regarding the distribution of collective farms' reven between investment and consumption, particularly sin the volume of such investment actually fell in 1964 nearly 20 per cent compared with 1963. Nevertheless, is quite clear that the target of the Six-year Plan for 40 per cent increase in peasants' real income betwe 1960 and 1965 was missed by a large margin.

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[151] S. Stanev, *Natsionalniat dokhod i zhiznenoto ravnishche v N.R. Bilgaria*, Sofia 1966, p. 32.

[152] Per capita output rose by 11 per cent and the per farmer payments from the collective by 15 per cent. The value of investment of the collective also increased a little in that year.

[153] No data for the peasants' consumer-price index are as yet available for 1964, but the wage-earners' cost-of-living index did not change in 1963.

[154] See, in particular, the SURVEY for 1960, Chapter IV, p. 43 and the study of economic development in Rumania in the *Bulletin*, Vol. 13, No. 2.

[155] The collectivization process proceeded much more slowly Rumania than in Bulgaria, as shown by the following data on t derivation of the global value of agricultural output outside st farms (percentages):

	Collective farms [a]	*Private plots*	*Private farms*
1955	7.8	2.0	90.2
1958	21.6	5.3	73.1
1960	45.6	12.9	41.4
1964	58.6	31.1	10.3

Source: Dezvoltarea agriculturii R.P.R., Bucharest 1965.

[a] Including agricultural associations.

[156] Quotas and prices for meat were modified in October 19 whereas other animal products, vegetables and technical crops w affected by decrees that took effect during the two following yea

[157] *Scînteia*, 13 February 1966.

Appendix 7.I

A NOTE ON THE METHODOLOGY AND COMPARABILITY OF INCOMES INDICES IN USE IN CENTRALLY PLANNED ECONOMIES

Several indices are used in the centrally planned economies to scribe changes in the living standards of the whole population d of its main sub-groups — wage-earners and peasants. These lices register changes in the ratio of total incomes to the number beneficiaries or recipients, resulting in "per capita" or "per rker" averages. The actual use, coverage and methology of such licators have varied over time and between countries. The purpose this short note is to identify the main methodological issues volved and to assess the inter-country and inter-period compara- ity of the various series of income indicators used in the main dy of the text.

tal income of population

As mentioned earlier (see, in particular, Appendix Table 7.VI), countries of the area except Poland and Rumania use, and publish ore or less regularly, some indices describing changes in the total come of the population. Past and current practices have varied tween countries in respect of the coverage of these aggregates, main issue having been to decide how much of the total cost "non-productive" services acquired by the population (such as ssenger transport or hair-dressing) or rendered to it by the state ch as education or health) as transfers in kind is to be included.

The Soviet approach — historically the first — was characterized the identification of the "total income of population" with the ncept of consumption in national income, by putting them both a "material cost only" basis. Thus, in Soviet practice the com- sition of the total income of the population is as follows :[1]

1. Incomes of workers and employees in state and co-operative enterprises, and in institutions (wages, salaries, premia, cash and in-kind receipts from collective farms, etc.);

us 2. Incomes (in cash and in kind) from subsidiary agricultural activities (net, i.e. reduced by material costs);

us 3. Cash payments from the social welfare fund (pensions, grants, scholarships) and other financial receipts such as interest from personal saving accounts, insurance premia, state loan repayments, gross borrowing;

ess 4. Taxes and levies, membership fees in special organizations (trade unions, party), insurance contributions, debt repayments, gross lending, financial accumulation (increase in savings deposits and in cash-in-hand);

us 5. Material cost of fully or partly subsidized services to population, e.g. in education, health and in social welfare (maintenance of children in nurseries, school meals, etc.);

us 6. Material cost of cultural and communal services obtained on a commercial basis by the population such as : theatres, cinemas, passenger transport, public baths, public laundries;

ess 7. Payments by the population for services listed under 6.

It is noteworthy that only the material cost of services listed under items 5 and 6 are included.[2] In other words, the wages and salaries of the personnel employed in non-productive services — such as salaries of doctors, teachers and artists — are excluded from the total, as well as from the total consumption of the population. The element of subsidy inherent in state expenditures on some forms of entertainment and on passenger transport (but, until recently, not on housing [3]) is allowed for by adding their material cost to total income and subtracting household expenditure.

As net personal savings (i.e. amounts saved *less* withdrawals), as well as gross lending, debt repayment, and increases in cash-holdings, are deducted from the total, the residual can be regarded as an aggregate of incomes and benefits accruing to the population over the period of a year, affecting its living standards directly, or as income actually utilized for consumption and material (as distinct from financial) accumulation.

The other approach, first practised by Hungarian statisticians, stems from recognition of the fact that, whatever may be the advantages of the material concept of national income for the study of output, the living standards of the population cannot be completely analysed without reckoning the full value of services acquired by or rendered to the population. Advocates of this approach [4] find strong support for their arguments in current, and still more in anticipated future, trends in consumption, the service component of which is expected to increase faster than that of commodities. They can point out, therefore, that present Soviet methodology under-estimates the true growth of consumption and of total population incomes. As Kapustin puts it : "The present practice of measuring real incomes cannot in the future express fully the gigantic growth of the extent of satisfaction of consumer needs due to the rapid expansion of social-fund benefits, which reach the population largely through the service sector".[5]

One consequence of the omission of the wage element in the calculation of the value of transfers in kind has been the attention given in Soviet[6] statistical publications and plan fulfilment reports to data, in absolute terms, on total state and enterprise (recently also collective farms) expenditure from the so-called "social funds of consumption" (*vyplaty i lgoty iz obshchestvennykh fondov potreblenya*). These include pensions and benefits from the social welfare and social security schemes, grants to single mothers and mothers of large families, educational grants paid to students, free or subsidized holidays, and expenditure on medical services and on education (including vocational training) when these are not included in the wage-fund or in the incomes of collective farmers. The total for education excludes expenditure on science, the press and the fine arts. Non-productive investment and capital repairs do not enter into the social welfare fund. All the benefits and subsidies obtained by the population are calculated on a net basis, i.e. after payment of taxes and levies, and after subtraction of the share of expenses contributed by the population, whenever relevant.[7]

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[1] Based on an article by three senior officials in the Central atistical Administration of the USSR, S. Partigul, V. Sobol and . Eydelman, in *Voprosy ekonomiki*, No. 6, 1961. See also I. Pisarev, *etodologicheskie voprosy izuchenia urovnya zhizhny trudyakhshikhsia*, Moscow 1962, p. 44.

[2] In both the Soviet and Hungarian definitions of total income, not only the services of public administration, national defence, housing, etc., but also some communal services which are not consumed individually — such as street lighting or maintenance of public gardens — are excluded *in toto*. It is not clear whether the borderline is the same for all countries of the area which construct this index.

[3] A change in the treatment of the housing subsidy seems to have been introduced in 1965. See P. Moskvin in *Vestnik statistiki*, No. 9, 1966.

[4] See, in particular, papers by M. Mod and S. Simon in the *Standard of Living*, Scientific Conference on Statistical Problems, 1-5 June 1961, Academy of Sciences, Budapest 1962 (available in English); and L. Drechsler, J. Benedecki, F. Nemeth, in *Gezdasagstatisztika*, 1959. Among supporters of this approach in the Soviet Union are three authorities on the methodology of living standards : I. Pisarev, S. Figurnov and Y. Kapustin. See, in particular, I. Pisarev, *op. cit.*; *Problemy ekonomiki truda* (Materials of a conference organized by the Labour Research Institute of the State Committee on Labour and Wages), Moscow 1963; and *Trud i zarabotnaya plata*, No. 12, 1959. See also S. Pech in *Wirtschaftwissenschaft*, No. 1, 1964 and C. Prisacaru in *Revista de Statistica*, No. 1, 1963, for eastern German and Rumanian views.

[5] *Problemy ekonomiki truda*, *op. cit.*, p. 123.

Hungarian practice of calculating total incomes consists in adding to income from work (net of taxes and other levies as well as of operational costs in agriculture), the net contribution of the state, enterprises and social organizations to the total (i.e. wage-inclusive) cost of health, education and social services. This approach is now followed in Czechoslovakia, too, where the index of total real incomes includes "the total volume of personal consumption, material consumption of institutions rendering services to population as well as the wage-funds in these institutions, and depreciation and investment in private housing",[8] and in eastern Germany. It seems, however, that in the latter country the total income aggregate is net of personal real and financial investment.[9]

Nominal incomes of wage-earners and of peasants

The bulk of wage-earners' income is derived from the wage-fund, control of which is one of the principal means available to the central authorities for regulating changes and differentials in income from employment. As a rule, the wage-fund includes gross (i.e. before tax) payments for work done (including overtime and production bonuses) as well as statutory remuneration for leave, hours not worked because of stoppages, wages paid to nursing mothers, etc. In some countries (e.g. the Soviet Union) it also includes the value of communal and social services rendered by the enterprise, as well as of goods delivered free of charge or at a reduced rate, to the personnel and their families. Social security benefits, such as family allowances, pensions and sickness benefits, do not usually enter into the wage-fund (in Czechoslovakia, however, sickness benefits are included); similarly, awards from special incentive funds (e.g. enterprise fund or profit participation schemes) and *ad hoc* individual bonuses (e.g. prizes for "social competition" or innovations) are as a rule excluded from the wage-fund, although they form part of the numerator of the real wage (or income) index.

For the statistical series of average nominal wages (usually broken down by economic sectors and industrial branches), the wage-fund is usually calculated on a gross (i.e. before tax) basis. However, for the computation of the real wage and income indices the net concept is as a rule used, i.e. the gross wage-bill is reduced by the amount of direct taxes, social security contributions (if any), and other statutory levies. Moreover, as already noted, for the real wage and income indices other types of remuneration are add to the total wage, those disbursed from special incentive fun operated at the enterprise level being particularly important. Sin the incidence of such awards varies quite considerably betwe countries and over time, the numerator of the index of real wag and incomes better reflects changes in the wages and incomes wage-earners than do the statistics of average wage-funds.

In addition to the index of average real wages (per wage-earne several countries — Bulgaria, Czechoslovakia, Hungary and t Soviet Union — have published, for some years at least, an ind of average total incomes of wage-earners, usually calculated or *per capita* rather than *per wage-earner* basis. The coverage of th index raises issues similar to those which were met in connexi with the total incomes of the whole population. The Soviet a Bulgarian indices include only the material cost of non-product services, whereas those used in Czechoslovakia include their to value. An all-inclusive index of total incomes of wage-earners available for Hungary since 1957; in addition that country h published, for the whole 1950-1965 period, an index referred to "personal income of wage-earners", which covers the total val of acquired services but excludes transfers in kind.

Regular series of synthetic indicators describing changes peasant incomes are now published in all the countries und study except eastern Germany and Rumania; but the definitio of peasant households and the coverage of gainful activities va greatly between the individual countries. In Hungary a househo is defined as a "peasant household" if a major part of total fam income originates in agricultural activity; and once the househo is thus defined incomes of its members from any source are includ under this general rubric. In Poland, on the other hand, the ind relates to changes in incomes accruing to individual peasants a collective farmers from agricultural pursuits only, omitting incon from other sources.

The Bulgarian and the Soviet indices of peasant incomes exclu non-material consumption but include transfers in kind, where the two Hungarian indices available for the whole period und study include the former but exclude the latter.[10] The covera seems to be wider in Czechoslovakia since the total value of servic in kind is accounted for. In both Hungary and Poland sever indices are constructed, some concentrating on incomes inclusi of changes in private assets, others referring to "consumpti income" only[11] (see Table 7.18).

Consumer-price indices

The choice of the deflator (or indeed, in some periods, of the inf tor) of changes in money incomes for calculation of trends in re terms differs substantially between countries and has frequen changed over time in most countries. Three principal approach are now adopted, ranging from the use of current weights in t Soviet Union to that of base-year weights in Poland, with Hunga — where Fisher's formula is employed — using an intermedia method.

The Soviet approach relies on a price index of goods and servic acquired by the population, based on the Paasche formula w changing weights :

$$\frac{\Sigma\, p_1 q_1}{\Sigma \frac{1}{k}\, p_1 q_1} \qquad \text{where } k = \frac{p_1}{p_0}$$

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[6] The Bulgarian practices seem to have followed broadly the Soviet approach. See Professor Stanev, *op. cit.*, sections 2 and 3

[7] *Narodnoe khozyaistvo SSSR*, 1961 (p. 807) and 1962 (p. 685). Starting in 1963, the series includes also collective farms' expenditure on social and cultural purposes as well as the state contribution to the cost of maintenance of the housing stock. *Ibid.*, 1963, p. 505.

[8] *Statisticka Rocenka CSSR*, 1963, p. 23.

[9] Professor Donda, "Experiences and conception of incomes statistics in the GDR", paper submitted to the 35th Session of the International Statistical Institute, No. 18, Belgrade 1965.

[10] An all-inclusive index was first published for the years 19 to 1962 and then replaced by a new series starting in 1960.

[11] "The real volume of consumption represents the total volun of money and goods in kind spent by the peasantry on their persor needs, whether these goods had been acquired in the accounti period or earlier". *The Standard of Living*, *op. cit.*, p. 241.

he weights, representing various types of purchases (state retail rade, collective farm markets, communal economy, etc.), are lerived largely from current trade statistics, supplemented by family udget data. The latter are particularly important in calculating rice indices for separate groups of the population, such as wage-arners or collective farmers.[12]

In broad outline, the Soviet approach was adopted by most astern European countries in the early postwar period, and is still sed in Bulgaria and — apparently — Rumania. However, the ractices of other countries of the area began to diverge in the nid-1950s. For the 1955-1960 quinquennium, the largely *ex-post* alculations of consumer-price indices undertaken in Czechoslo-akia, eastern Germany and Poland were based on a constant asket of goods and services, the base years being 1955, 1960 and 957 respectively. Since 1960, Czechoslovakia and eastern Germany ave been using the Laspeyres formula with constant (1960) weights, vhereas Polish statisticians have been applying the Laspeyres ndex with weights changing from year to year :

$$\frac{\Sigma\, q_0\, p_0\, \frac{p_1}{p_0}}{\Sigma\, q_0\, p_0}$$

n Hungary, where a Paasche index was used until 1956, Fisher's ormula (geometric mean of Laspeyres' and Paasche's indices) vith changing weights has been in use since.

There are also wide inter-country differences in the extent to vhich special cost-of-living indices are prepared for various categ-ries of the population. Most countries have separate indices for vage-earners and peasants, but in eastern Germany separate cost-f-living indices are also calculated for 16 sub-groups of wage-arners, classified according to family size and income, and for groups of pensioners (according to size of household). Special ndices are also computed for different income strata in Czecho-lovakia. In Hungary, a separate consumer-price index (based on onstant weights) for the Budapest area is prepared monthly. A nonthly price index of goods and services acquired in retail trade y the whole population (broken down by large categories of urchaser) is also published regularly in Poland.

he reliability and comparability of income indices

Some features of centrally planned economies are favourable or the establishment of reliable and comparable income statistics, ut the influence of others is rather negative. Among the former the ollowing may be mentioned. First, the objective of planned expan-ion in general, and the need for control over incomes in particular, as led to the establishment of a very effective system for collecting tatistical information on incomes. Thus, the bulk of non-farm ncome derives from the wage-fund, the size and composition of vhich is reported currently and in detail. In collectivized agriculture he proportion of total peasant income obtained from the collective s known with some precision, as is the value of sales by collective armers on free markets. Moreover, the value of social benefits n money and kind is readily accessible in state financial statistics. hus, that part of total income which is not easily captured by urrent statistical reporting can scarcely be significant, and is argely limited to exchanges within the household sector, and erhaps to some unauthorized "leakages" between it and the govern-nent sector. Secondly, except in the early investment phase which nded around 1952-1953, most governments of the area have ursued a policy of maintaining the general price level relatively table. This policy in itself must have greatly reduced the harm lone to international comparability by the existence of different nethods of constructing cost-of-living indices. Thirdly, the calcula-ion of consumer-price indices is facilitated in the centrally planned economies by the ease of reference to price catalogues, which account for an overwhelming majority of price quotations, as well as by the availability of data on the value and composition of retail trade, which provide material for evaluating expenditure weighst. A well-developed system of household budgetary inquiries has also been in operation for some time everywhere.

Among those features of the planned economies and of their actual postwar development which have added to the usual problems involved in index calculation, mention should be made of the multiplicity of prices prevailing in agriculture and the effect of changes in the delivery system on the average producer-price level. Statistical methods of evaluating the on-farm consumption of farmers have also varied.[13] Secondly, even though — as already mentioned — average consumer-price levels have not fluctuated greatly since the mid-1950s, the overall stability of trend has been the outcome of generally rising food prices and declining prices of manufactures; these changing price ratios have tended to widen the difference in rates obtained by the use of Laspeyres and, alternatively, Paasche indices. Thirdly, it has been argued that, with ntroduction of a new and more expensive assortment of consumers' goods, the cheaper brands tend to disappear, causing a shift in the composition of sales and an increase in average prices that is not reflected in the price index.[14]

Taking these various influences into account, as well as the differences and changes in coverage and methods noted earlier, it is clear that much caution is called for in interpreting time trends and in making inter-country comparisons on the basis of the tabulations contained in Chapter 7. This applies particularly to the earlier years of the period, when sharp price changes (downwards in the Soviet Union and in eastern Germany and upwards in other countries) coexisted with significant imbalances in consumers' markets. These were also the years when property relations and sources of incomes were changing, both inside and outside agriculture, and when information on incomes was much less adequate than later. To a certain extent the better market balance and generally improved statistics and statistical methodology of later years themselves reduce the validity of comparisons over time. As far as inter-country comparisons are concerned, the long-term trends were considerably affected by the choice of the index, the Paasche-type imparting a downward bias in the cost-of-living trend whereas the opposite is true — as is well known — of the Laspeyres formula.

Considerable progress has been made in all the countries of the area during the last decade in improving the quality of statistics measuring domestic trends in living standards. On the other hand, large scope still exists for assuring better inter-country comparability. In this connexion, further contributions are expected from CMEA statistical activities in addition to those already made in some related fields, such as material consumption.

Reference should also be made to the work undertaken under the auspices of the Statistical Commission of the United Nations and, in Europe, the Conference of European Statisticians on the subject of statistics of income distribution, with a view to preparing international recommendations for statistics in this field to be compiled in the context of, or related to, the national accounts and balances. It is intended that these recommendations should accommodate the needs both of countries with market economies and of countries with centrally planned economies.

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[12] For details of weights, and their derivation, see P. Moskvin, *p. cit*. It appears that the expenditure on housing is now represented n the index by the value of amortization of the housing stock rather han by estimates of actual outlays on rent payments.

[13] See "A note on some aspects of national accounting methodology in eastern Europe and the Soviet Union", the *Bulletin*, Vol. 11, No. 3.

[14] A Hungarian study has shown that between 1949 and 1955 a price index corrected for unwarranted changes in the composition rose to 191.7, compared with an uncorrected figure of only 171.6 (*Aralukulas magyarorszagon*, 1948, 1949-1955, p. 20). In the Soviet Union changes in the composition output of china towards more expensive articles were responsible in the 1958-1963 period for the difference between its actual growth by 53 per cent and the planned increase by 31 per cent only. *Sovetskaya Torgovlya*, No. 1, 1965, p. 3.

APPENDIX TABLE 7.I

Global output of agriculture and industry (at constant prices), 1949 to 1965

Index numbers, 1955=100

Country and indicator	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria																	
Global output of agriculture	73.8	73.2	102.8	85.9	104.2	91.5	100.0	93.6	109.1	108.4	128.0	132.2	127.6	133.0	136.4	152.0	154.7
Global output of industry	45.6	52.7	62.8	73.2	84.0	92.8	100.0	114.9	133.2	153.2	184.5	209.1	233.8	260.5	287.5	317.6	364.0
of which: Group A	37.1	44.2	51.7	69.5	78.4	93.7	100.0	116.7	131.2	153.2	192.3	229.6	252.6	290.9	332.0	379.5	443.6
Group B	52.8	59.7	72.1	76.3	88.6	92.1	100.0	113.3	134.9	153.1	177.9	191.9	217.6	235.3	251.8	268.5	301.5
Czechoslovakia																	
Global output of agriculture	..	92.2	93.4	90.2	90.8	89.5	100.0	103.0	102.7	105.3	104.6	110.3	110.3	101.9	109.4	112.2	107.8
Global output of industry	51.0	58.9	67.0	79.0	86.2	90.2	100.0	109.4	120.5	133.9	148.7	166.1	180.8	192.0	190.6	198.2	214.3
of which: Group A	45.4	53.0	62.7	77.9	88.0	92.0	100.0	110.8	122.1	136.5	153.8	174.3	190.0	203.6	201.6	211.6	231.3
Group B	57.9	66.5	73.1	81.2	84.3	88.3	100.0	107.6	118.8	131.5	142.1	155.8	169.0	176.6	176.6	181.2	191.9
Eastern Germany																	
Global output of agriculture [a]	..	65.1	65.6	76.2	76.5	86.3	100.0	95.8	112.4	124.2	129.4	138.0	135.1	131.1	153.3	173.3	193.3
Global output of industry	..	53	65	75	84	93	100	106	114	127	143	155	164	174	182	193	206
of which: basic industries	..	55.9	65.4	74.9	83.8	91.6	100.0	107.8	115.6	125.7	138.5	148.6	157.5	167.6	175.4	189.4	201.7
metal processing industry	..	46.5	58.1	70.2	82.8	92.6	100.0	108.8	117.2	135.8	160.5	178.1	192.6	210.2	226.0	243.3	260.9
light industry	..	60.6	72.7	79.4	85.5	95.2	100.0	102.4	110.9	123.0	137.0	144.2	152.7	160.0	158.2	164.2	172.1
food processing industry	..	46.3	63.4	77.3	96.1	92.6	100.0	104.6	112.5	121.8	127.8	138.4	144.0	144.0	150.0	157.4	164.8
Hungary																	
Global output of agriculture	78	83	96	73	88	89	100	88	99	105	111	105	106	108	113	119	113
Global output of industry	43	53	67	80	90	91	100	91	105	117	128	143	158	170	182	198	207
of which: heavy industry [b]	38	49	66	84	98	93	100	93	103	121	137	157	176	193	206	225	236
light industry [b]	40	52	68	81	83	91	100	83	108	115	107	143	155	163	174	188	195
food processing industry [b]	41	55	64	78	88	93	100	98	101	105	115	121	133	143	154	169	172
Poland																	
Global output of agriculture	88.5	95.1	88.1	89.7	92.1	97.5	100.0	107.4	111.8	115.1	114.1	120.3	132.7	121.7	126.6	128.2	137.7
Global output of industry	37.0	47.3	57.7	68.6	80.6	89.8	100.0	109.0	119.8	131.6	143.3	159.6	176.0	191.0	201.4	220.2	240.2
of which: Group A	33.9	43.4	54.3	66.5	79.5	90.0	100.0	110.6	119.2	130.0	147.2	167.1	186.7	205.0	220.4	242.8	266.1
Group B	41.1	52.1	61.9	70.8	81.7	89.5	100.0	107.2	120.4	133.4	140.0	151.6	164.2	174.6	178.7	193.0	209.2
Rumania																	
Global output of agriculture	..	61.7	76.7	71.7	83.3	85.0	100.0	80.8	101.0	86.7	104.0	106.0	110.8	101.6	105.0	111.7	116.7
Global output of industry	..	49.2	61.4	72.3	83.2	88.1	100.0	111.3	120.3	132.7	145.0	168.3	194.5	221.3	248.5	284.2	321.2
of which: Group A	..	46.0	58.5	71.9	86.2	88.9	100.0	114.3	125.3	137.8	157.6	182.9	212.9	250.2	285.7	333.6	379.3
Group B	..	53.8	65.9	71.9	77.8	87.0	100.0	107.0	114.1	123.8	129.2	149.7	170.8	184.9	201.6	221.6	247.6
Soviet Union																	
Global output of agriculture	82.4	82.4	76.5	83.5	85.9	90.0	100.0	113.5	115.9	128.2	128.8	131.8	135.3	137.1	127.1	145.4	147.0
Global output of industry	44.1	54.1	63.1	70.3	78.8	89.1	100.0	110.6	121.9	134.4	149.7	163.8	178.8	195.9	211.9	227.4	247.0
of which: Group A	41.8	52.6	61.3	68.7	76.7	87.2	100.0	111.3	123.3	137.4	154.4	170.8	188.5	208.7	228.5	248.7	270.3
Group B	49.3	56.7	65.9	72.8	81.6	92.2	100.0	109.2	118.0	127.6	140.1	150.2	160.4	172.4	181.1	188.0	204.0

Sources: National statistics; direct communication from the Central Statistical Office of Bulgaria.

[a] At current prices.

[b] Socialist sector.

APPENDIX TABLE 7.II

Urban and rural populations [a]

Index numbers, 1955=100

Country and category	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Albania																		
Urban	..	..	65.2	..	..	..	..	100.0	105.3	109.8	117.7	124.3	131.1	136.1	143.4	151.0	157.2	..
Rural	..	..	96.1	..	..	..	..	100.0	100.9	103.3	104.7	107.1	111.5	113.0	115.2	117.4	121.1	..
Bulgaria [b]																		
Urban	78.6	80.6	83.0	85.6	88.3	92.1	96.2	100.0	105.3	109.5	113.2	117.2	123.0	128.5	132.6	137.1	147.6	159.7[f]
Rural	102.7	103.1	103.0	102.0	101.1	100.7	100.3	100.0	99.1	98.6	98.4	97.9	96.5	95.5	94.9	94.1	90.5	80.6[f]
Eastern Germany																		
Urban [c]	..	..	102.1	..	102.2	101.6	101.0	100.0	98.6	97.4	96.9	97.1	96.8	96.2	96.8	97.3	97.1	97.6
Rural [d]	..	..	105.7	..	103.6	101.6	100.7	100.0	99.0	98.3	97.5	96.6	95.2	94.6	94.2	94.0	91.1	90.6
Hungary																		
Urban	..	87.6	89.4	92.0	94.1	96.1	98.1	100.0	101.5	99.9	100.3	101.7	103.1	105.6	107.6	109.1	110.8	112.3
Rural	..	98.6	98.9	98.7	98.7	100.5	99.2	100.0	101.0	100.8	101.2	101.4	101.3	100.4	99.8	99.2	98.7	98.3
Poland																		
Urban	..	..	78.8	81.7	89.5	93.0	96.0	100.0	106.6	111.3	114.7	119.0	123.3	125.9	129.2	131.5	134.4	136.8
Rural	..	..	100.0	100.6	98.0	98.6	99.7	100.0	98.6	98.7	99.2	98.9	98.9	99.7	98.8	99.4	100.2	101.0
Rumania [e]																		
Urban	70.3	..	77.7*	..	..	..	..	100.0	103.6	106.4	108.4	110.0	111.9	114.1	115.6	118.0	119.5	121.4
Rural	101.0	..	..	..	..	..	..	100.0	99.8	101.4	102.4	103.1	103.7	104.1	104.4	104.5	104.7	104.7
Soviet Union																		
Urban	..	..	80.4	84.6	89.0	92.9	96.9	100.0	102.2	105.9	110.8	115.9	120.3	125.5	129.5	133.4	137.4	140.9
Rural	..	..	100.9	100.5	99.9	99.7	99.4	100.0	101.5	101.8	101.1	100.6	100.4	99.7	99.8	99.9	99.6	99.4

Sources: National statistics.

[a] At the beginning of the year, unless otherwise stated.

[b] At mid-year.

[c] Localities with more than 2,000 inhabitants.
Localities with less than 2,000 inhabitants.

[d] Mide-year data since 1957.

[e] End-1965 census data (provisional results).

APPENDIX TABLE 7.III

Productive and non-productive investment outlays (at constant prices), 1949 to 1965

Index numbers, 1955=100

Country and category	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria																	
Total investment outlays [a]	52.1	53.4	67.6	82.2	90.0	95.3	100.0	102.1	98.8	120.4	195.7	231.1	241.0	256.7	294.2	324.5	351
of which: productive	..	51.1	68.1	78.5	89.9	93.1	100.0	102.6	100.7	123.7	206.3	238.2	250.2	271.5	312.0	341.7	..
of which: agriculture [b]	43.1	31.4	57.6	48.6	48.5	70.3	100.0	108.2	67.3	79.4	140.6	194.2	148.4	134.2	177.7	181.1	203.3
non-productive	..	64.1	72.1	100.4	97.9	106.7	100.0	99.7	91.2	106.0	150.0	200.0	200.3	190.9	215.5	246.8	..
of which: housing [b]	22.4	31.3	35.3	49.0	65.7	113.7	100.0	84.8	45.2	33.5	70.5	101.9	181.9	168.9	199.1	232.7	244.2
Czechoslovakia																	
Total investment outlays	..	63.9	77.5	91.5	94.8	93.0	100.0	113.6	124.2	141.0	168.5	189.4	203.0	197.6	175.9	196.8	212.2
of which: productive	..	70.4	85.6	100.1	97.6	94.0	100.0	117.1	131.4	154.8	190.5	214.1	232.3	227.3	201.9	227.9	246.6
of which: agriculture	..	35.9	56.7	58.0	74.6	73.3	100.0	126.9	134.7	163.3	200.3	223.7	240.9	210.7	180.8	205.6	213.6
non-productive	..	51.1	61.6	74.8	89.4	91.1	100.0	106.7	110.0	108.1	125.6	140.9	145.6	139.5	125.2	136.1	145.1
of which: housing	..	44.4	49.9	63.4	72.6	91.8	100.0	99.0	99.3	96.9	107.9	119.0	118.8	120.7	116.6	125.8	126.4
Eastern Germany																	
Total investment outlays [c]	..	44.5	54.4	69.4	82.8	88.0	100.0	125.0	134.6	151.6	176.3	194.6	194.7	198.3	209.0	227.3	244.8
Hungary																	
Total investment outlays [d e]	..	88.5*	120*	145*	153*	106*	100	103.5*	99*	126*	178*	209*	186*	215*	245*	257*	257*
of which: productive	..	82*	115*	143*	146*	102*	100	101*	88*	115*	171*	202*	177*	207*	238*	250*	..
non-productive	..	121*	148*	157*	188*	127*	100	115*	148*	182*	212*	242*	230*	254*	282*	291*	..
Poland																	
Total investment outlays	42.6	58.8	65.7	78.2	90.3	96.2	100.0	104.4	111.9	122.9	143.6	152.2	163.4	181.2	186.7	194.5	213.5
of which: productive	40.3	59.3	63.4	82.2	94.3	98.3	100.0	102.8	108.6	117.0	137.1	145.7	158.8	182.8	191.2	200.1	224.3
of which: agriculture	..	56.6	35.9	49.5	57.3	71.0	100.0	105.8	110.2	114.5	122.1	133.6	148.1	161.1	177.2	211.8	248.7
non-productive	48.7	57.3	71.9	67.4	79.6	90.7	100.0	108.7	120.8	138.9	161.2	169.7	175.9	177.0	174.5	179.7	184.2
of which: housing	..	45.7	50.4	54.6	63.1	82.9	100.0	119.3	144.4	170.2	188.1	195.2	206.6	197.6	195.6	200.1	203.1
Rumania																	
Total investment outlays	..	42.1	59.2	79.1	100.8	89.6	100.0	112.8	105.7	116.0	137.1	181.4	220.7	253.1	275.3	304.7	329.8
of which: productive	..	42.7	60.7	81.8	102.4	89.8	100.0	109.7	102.2	113.7	134.8	177.2	217.7	253.0	276.4	304.7	332.5
of which: agriculture	..	33.1	35.5	51.9	54.5	78.3	100.0	88.4	101.3	142.6	192.0	256.8	315.4	361.6	385.1	403.0	428.3
non-productive	..	38.3	50.2	63.2	91.2	88.1	100.0	131.0	126.7	130.9	150.1	205.8	237.9	253.9	268.7	305.0	314.2
of which: housing	..	18.9	31.4	43.8	84.7	80.6	100.0	114.2	116.6	118.0	130.1	199.1	235.5	266.9	296.5	345.0	368.0
Soviet Union																	
Total investment outlays	46.3*	55.6	63.3	70.6	74.4	83.3	100.0	115.0	129.4	150.6	170.6	183.9	192.5	201.5	212.1	230.8	247.6
of which: agriculture [f]	..	43.7	48.9	50.8	50.2	72.6	100.0	105.8	110.5	124.6	133.3	136.5	150.4	168.6	184*	217.1	236.2
housing [g]	..	45.3	..	..	..	..	..	100.0	139.1	168.6	186.1	185.2	176.3	172.9	172.6	165.5	165.5

Sources: National statistics; direct communication from the Central Statistical Office of Bulgaria.

[a] Excluding private investment from own means.

[b] Excluding investment in collective farms and in private house-building. The shares of these two types of investment in total investment were as follows (percentages):

	Collective farms	*Private house-building*
1955	8.0	..
1957	12.2	19.8
1960	18.0	12.7

[c] At current prices.

[d] 1952-1958 data at current prices.

[e] State and co-operative sector.

[f] Productive investment only.

[g] Index numbers, 1956 = 100.

National income, consumption and accumulation at constant prices

Index numbers, 1955=100

Country and indicator	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria																	
National income produced	..	..	79.2	78.7	95.5	94.4	100.0	100.6	114.0	122.0	148.2	158.5	163.3	175.3	186.5	204.9	219.4
National income distributed	..	..	..	81.2	98.1	95.0	100.0	102.5	115.1	126.0	162.6	166.6	168.1	183.3	204.6	226.6	242.7
Total consumption	..	..	..	78.0	86.2	95.5	100.0	110.8	116.0	127.6	143.0	152.3	164.7	172.4	182.1	195.7	210.2
of which:																	
individual consumption	..	..	..	78.6	86.9	96.6	100.0	111.1	116.7	129.0	143.8	151.4	164.7	171.4	181.3	192.8	..
collective consumption	..	..	..	71.2	78.4	83.0	100.0	107.5	108.3	112.7	134.3	161.3	165.0	183.1	189.3	227.2	..
Accumulation	..	..	..	93.4	143.7	93.2	100.0	70.9	111.8	117.9	235.7	221.5	180.9	225.0	296.1	349.9	..
of which:																	
net increase in fixed assets	..	..	..	49.8	45.4	77.5	100.0	81.7	88.4	86.2	139.5	164.0	157.8	154.7	240.9	283.4	..
Czechoslovakia																	
National income produced	61.7	67.9	74.4	82.2	87.6	90.7	100.0	105.3	113.0	122.3	130.0	140.5	150.1	157.7	148.4	149.7	155.3
National income distributed	63.2	68.6	75.8	84.6	87.7	90.6	100.0	104.8	114.6	122.0	129.7	140.1	151.9	152.9	146.5	149.3	155.9
Total consumption	65.5	75.5	78.1	84.1	85.3	95.9	100.0	106.3	113.9	115.4	120.9	131.8	137.5	141.6	144.0	148.5	156.2
of which:																	
individual consumption	70.2	81.7	82.5	84.4	81.3	92.6	100.0	108.2	117.4	118.6	124.7	136.5	141.1	144.5	146.1	150.5	158.2
collective consumption	50.5	56.0	64.2	83.4	98.0	105.9	100.0	100.5	103.2	105.5	108.9	116.8	126.2	132.5	137.3	142.4	149.8
of which: material cost of services to population	..	55.8	..	..	88.4	96.5	100.0	..	107.3	112.6	117.5	122.6	128.5	134.4	139.6	151.6	159.2*
Accumulation	49.9	27.8	61.6	87.6	101.7	58.8	100.0	94.9	118.6	161.5	182.4	189.5	238.5	220.8	159.6	151.6	151.8
Eastern Germany																	
National income distributed	..	48*	..	..	..	..	100	107	116	129	141	147	152	156	156	163	170
Total consumption	..	48*	..	..	..	..	100	..	..	..	..	138	144	143	144	150	154
of which:																	
individual consumption	..	..	..	..	..	..	100	..	..	..	..	139	145	144	145	150	155
collective consumption	..	..	..	..	..	..	100	..	..	..	..	128	135	134	134	146	149
of which: material cost of services to population	..	..	..	..	..	..	100	..	..	..	..	131	131	140	150	165	166
Accumulation	..	50*	..	..	..	..	100	..	..	..	..	215	216	258	249	266	292
of which:																	
net increase in fixed assets:																	
in productive sectors	..	..	..	..	..	..	100	..	..	..	..	271	275	283	297	319	355
in non-productive sectors	..	..	..	..	..	..	100	..	..	..	..	162	174	172	182	186	194
Hungary																	
National income produced	61.1	73.7	86.3	84.6	95.7	91.8	100.0	89.2	110.0	116.8	124.9	137.6	145.9	152.8	161.5	169.1	172.1
National income distributed	63.6	73.5	86.8	85.9	96.9	93.8	100.0	98.3	116.4	115.7	127.0	142.4	145.8	155.0	166.0	175.8	173.0
Total consumption	65.6	72.7	77.7	83.7	90.4	96.1	100.0	107.1	116.1	121.9	131.8	141.3	143.5	149.7	158.4	167.4	172.0
of which:																	
private consumption	71.0	75.3	78.6	75.4	77.8	93.5	100.0	109.0	118.8	123.9	133.6	142.9	144.2	149.4	157.6	166.6	171.3
material cost of services to population	45.4	56.2	64.4	71.8	87.9	96.2	100.0	96.0	114.8	125.1	135.9	148.7	156.3	169.0	181.3	190.4	196.4
public consumption	51.1	74.0	88.1	147.1	175.6	123.8	100.0	91.7	87.0	98.3	109.3	123.5	131.0	142.0	152.9	164.2	171.4
Accumulation	47.1	72.6	107.6	88.2	110.6	84.0	100.0	18.3	124.8	98.1	115.5	155.8	163.6	183.4	202.6	215.2	183.0
of which:																	
net increase in fixed assets	47.5	57.2	87.9	105.6	115.0	93.7	100.0	88.1	81.0	125.4	138.5	186.0	169.4	189.4	212.3	231.0	236.9

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APPENDIX TABLE 7.IV (*continued*)

Country and indicator	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Poland																	
National income produced	57.6	66.3	71.3	75.7	83.6	92.4	100.0	106.5	118.0	124.4	131.1	136.8	148.0	151.0	161.0	171.9	182.4
National income distributed	57.2	65.8	70.8	75.2	82.9	91.8	100.0	107.8	122.5	126.4	135.3	139.2	149.4	153.4	163.0	171.0	183.5
Total consumption	62.0	67.2	72.6	74.8	77.2	90.9	100.0	110.4	122.7	126.6	134.6	136.8	145.1	150.3	157.3	164.5	173.5
of which:																	
a. Individual consumption	62.7	67.9	73.0	75.6	78.2	91.9	100.0	110.6	123.4	126.8	134.3	136.1	144.0	148.1	155.0	161.7	170.3
b. Material cost of services to population	..	..	..	..	..	..	100.0	131.2	150.0	160.4	175.0	187.5	205.1	231.6	255.8	278.1	296.7
c. Public consumption	..	..	..	..	..	..	100.0	94.0	92.8	102.4	115.7	122.9	136.5	154.1	152.2	160.3	173.9
a + b Consumption of population	..	..	..	..	..	..	100.0	111.2	124.1	127.7	135.4	137.5	145.6	150.2	157.6	164.8	173.7
b + c Collective consumption	52.7	58.0	67.9	64.1	64.1	77.9	100.0	107.6	113.7	123.7	137.4	146.6	161.8	182.7	189.0	202.8	217.8
Accumulation	39.7	60.7	64.2	76.6	103.5	95.2	100.0	98.3	121.9	125.7	137.9	148.2	164.4	164.4	183.2	193.4	217.6
of which:																	
net increase in fixed assets	40.1	55.3	62.8	75.9	89.7	94.6	100.0	102.9	114.0	124.9	147.9	154.4	167.2	195.2	197.2	206.5	228.8
Soviet Union																	
National income produced	48.6	58.4	65.5	72.6	79.7	89.3	100.0	111.4	118.9	133.8	143.8	154.8	165.5	174.7	182.2	198.6	211.0

Sources: National statistical yearbooks; *A nemzeti jövedelem és a lakosság életkörülményei 1963, 1964;* direct communications from the Central Statistical Offices of Bulgaria and Poland.

National income, consumption and accumulation (at constant prices), 1950 to 1965

Percentage increase over preceding year

Country and indicator	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria																
National income produced	..	..	-0.8	21.5	-0.7	5.6	0.9	13.1	6.9	21.5	7.0	2.8	6.2	7.5	9.9	7.1
National income distributed	..	..	..	20.8	-3.2	5.3	2.5	12.3	9.1	29.1	2.7	0.9	9.0	12.2	10.6	7.1
Total consumption	..	..	..	10.5	10.8	4.7	10.8	4.7	10.0	12.1	6.5	8.2	4.7	5.6	7.4	7.4
of which :																
individual consumption	..	..	..	10.6	11.2	3.5	11.1	5.0	10.5	11.5	5.3	8.8	4.1	5.8	6.3	..
collective consumption	..	..	..	10.1	5.9	20.5	7.5	0.8	4.1	19.2	20.1	2.2	11.0	3.6	20.0	..
Accumulation	..	..	..	53.9	-35.1	7.3	-29.1	57.7	5.5	99.9	-6.0	-18.3	24.4	31.7	18.2	..
of which :																
net increase in fixed assets	..	..	..	-13.4	-79.7	29.1	-18.3	8.1	-2.4	61.8	17.5	-3.8	-1.9	55.7	17.7	..
Czechoslovakia																
National income produced	10.0	9.3	10.5	6.6	3.5	10.3	5.3	7.3	8.2	6.3	8.1	6.8	1.1	-2.2	0.9	3.4
National income distributed	8.5	10.5	11.6	3.7	3.3	10.4	4.8	9.4	6.5	6.3	8.0	8.5	0.7	-4.2	1.9	4.4
Total consumption	15.3	3.4	7.7	1.4	12.4	4.3	6.3	7.1	1.3	4.8	9.0	4.3	3.0	1.7	3.1	5.2
of which :																
individual consumption	16.4	1.0	2.3	-3.7	13.9	8.0	8.2	8.5	1.0	5.1	9.5	3.4	2.4	1.1	3.0	5.1
collective consumption	10.9	14.6	29.9	17.5	8.1	-5.6	0.5	2.7	2.2	3.2	7.3	8.0	5.0	3.6	3.7	5.2
of which :																
material cost of services to population	..	..	..	..	9.2	3.6	..	..	4.9	4.4	4.3	4.8	4.6	3.9	8.6	5.0
Accumulation	-44.3	21.6	42.2	16.1	-42.2	70.0	-5.1	25.0	36.2	12.9	3.9	25.9	-7.4	-27.7	-5.0	0.1
Eastern Germany																
National income distributed	..	..	..	..	..	..	7.0	8.4	11.2	9.3	4.3	3.4	2.6	—	4.5	4.3
Total consumption	..	..	..	..	..	..	..	..	..	..	..	4.3	-0.7	0.7	4.2	2.7
of which :																
individual consumption	..	..	..	..	..	..	..	..	..	..	..	4.3	-0.7	0.7	3.4	3.3
collective consumption	..	..	..	..	..	..	..	..	..	..	..	5.5	-0.7	—	9.0	2.1
of which :																
material cost of services to population	..	..	..	..	..	..	..	..	..	..	..	—	6.9	7.1	10.0	0.6
Accumulation	..	..	..	..	..	..	..	..	..	..	..	0.5	19.4	-3.5	6.8	9.8
of which :																
net increase in fixed assets:																
in productive sector	..	..	..	..	..	..	..	..	..	..	..	1.5	2.9	4.9	7.4	11.3
in non-productive sector	..	..	..	..	..	..	..	..	..	..	..	7.4	-1.1	5.8	2.2	4.3
Hungary																
National income produced	20.6	17.1	-1.9	13.1	-4.1	8.9	-10.8	23.3	6.2	6.9	10.2	6.1	4.7	5.7	4.7	18
National income distributed	15.6	18.1	-1.0	12.8	-3.2	6.6	-11.7	31.8	-0.6	9.8	12.1	2.4	6.3	7.1	5.9	-2.0
Total consumption	10.9	6.9	7.8	8.0	6.3	4.0	7.1	8.4	5.0	8.1	7.2	1.6	4.3	5.8	5.7	2.9
of which :																
private consumption	6.1	4.4	-4.1	3.2	20.2	7.0	9.0	9.0	4.3	7.8	7.0	0.9	3.6	5.5	5.7	2.8
material cost of services to population	23.8	14.6	11.5	22.4	9.4	4.0	-4.0	19.6	9.0	8.6	9.4	5.1	8.1	7.3	5.0	3.1
public consumption	44.8	19.1	67.0	19.4	-29.5	-19.2	-8.3	-5.1	13.0	11.2	13.0	6.1	8.4	7.7	7.4	4.4
Accumulation	54.3	48.2	-18.1	25.5	-24.1	19.1	-81.7	582.0	-21.4	17.7	34.9	5.0	12.1	10.5	6.2	-14.6
of which :																
net increase in fixed assets	20.5	53.8	20.0	8.9	-18.5	6.7	-11.9	-8.1	54.9	10.4	34.3	-8.9	11.8	12.1	8.8	5.7

(continued on page 68)

APPENDIX TABLE 7.V (*continued*)

Country and indicator	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Poland																
National income produced	15.1	7.5	6.2	10.4	10.5	8.2	6.5	10.8	5.4	5.4	4.3	8.2	2.0	6.6	6.8	6.1
National income distributed	15.0	7.6	6.2	10.2	10.7	8.9	7.8	13.6	3.2	7.0	2.9	7.3	2.7	6.3	5.0	7.3
Total consumption	8.4	8.0	3.0	3.2	17.7	10.0	10.4	11.1	3.2	6.3	1.6	6.1	3.6	4.7	4.6	5.5
of which:																
a. Individual consumption	8.3	7.5	3.6	3.4	17.5	8.8	10.6	11.6	2.8	5.9	1.3	5.8	2.8	4.7	4.3	5.3
b. Material cost of services to population	..	..	..	..	..	..	31.2	14.3	6.9	9.1	7.1	9.4	12.9	10.4	8.7	6.7
c. Public consumption	..	..	..	..	..	..	−6.0	−1.3	10.3	13.0	6.2	11.1	12.9	−1.2	5.3	8.5
a + b Consumption of population	..	..	..	..	..	..	11.2	11.6	2.9	6.0	1.6	5.9	3.2	4.9	4.6	5.4
b + c Collective consumption	10.1	17.1	−5.6	—	21.5	28.4	7.6	5.7	8.8	11.1	6.7	10.4	12.9	3.4	7.3	7.4
Accumulation	52.9	5.8	19.3	35.1	−8.0	5.0	−1.7	24.0	3.1	9.7	7.5	10.9	—	11.4	5.6	12.5
of which:																
net increase in fixed assets	37.9	13.6	20.9	18.2	5.5	5.7	2.9	10.8	9.6	18.4	4.4	8.3	16.7	1.0	4.7	10.8
Soviet Union																
National income produced	20.2	12.2	10.8	9.8	12.0	12.0	11.4	6.7	12.5	7.5	7.7	6.8	5.7	4.2	9.0	6.1

Sources: See Appendix Table 7.IV.

APPENDIX TABLE 7.VI

Trends in real incomes of population, wage-earners and peasants, 1949 to 1965

Index numbers, 1955=100

Country and category		1949	1950	1951	1952	1953	1954	1955	1956
lgaria									
Incomes of population	*(per capita)*	..	..	..	82.1	92.7	97.9	100.0	102.0
Incomes of workers and employees	*(per capita)*	..	..	..	72.7	..	..	100.0	109.6
Wages	*(per wage-earner)*	..	..	..	69.3	77.6	91.4	100.0	114.2
Incomes of peasants	*(per capita)*	..	..	..	90.3	..	..	100.0	96.3
echoslovakia									
Incomes of population	*(per capita)*	68 [a]	..	..	..	..	..	100.0	106*
Incomes of workers and employees	*(per capita)*	..	..	..	..	..	..	100.0	106.6
Wages	*(per wage-earner)*	..	..	..	..	86.1	95.0	100.0	..
Incomes of farmers	*(per capita)*	..	..	..	..	..	..	100.0	..
stern Germany									
Incomes of population	*(per capita)*	..	..	..	..	..	..	100	..
Wages	*(per wage-earner)* [b]	..	47.4	..	..	..	..	100.0	105.7*
ngary									
Personal incomes of population	*(per capita)* [cd]	..	..	..	..	..	..	..	..
Personal incomes of wage-earners	*(per capita)* [c]	82.1	84.4	80.3	71.8	74.7	94.4	100.0	106.1
Wages	*(per wage-earner)*	94.3	95.6	84.6	77.6	82.1	96.5	100.0	111.6
Personal consumption incomes of peasants	*(per capita)*	85.0	86.4	100.1	56.1	91.2	93.2	100.0	97.1
land									
Wages	*(per wage-earner)*	81.3	91.1	91.2	84.3	84.0	94.8	100.0	111.6
Consumption incomes of peasants [e]	*(total)*	..	..	..	..	..	..	100	113
mania									
Wages	*(per wage-earner)*	..	80	83*	83*	88*	96*	100	107
Incomes of peasants	*(per capita)*	..	59	..	63	..	82	100	84
viet Union									
Wages	*(per wage-earner)*	..	72	79	85	94	99	100	104
Incomes of peasants	*(per working peasant)*	..	67	73	79	89	93	100	108

lgaria										
Incomes of population	*(per capita)*	115.4	125.0	140.6	146.8	150.8	160.6	167.2	172.9	184.0
Incomes of workers and employees	*(per capita)*	116.6	115.2	125.3	139.3	145.2	145.8	146.6	153.0	156.4
Wages	*(per wage-earner)*	118.5	120.4	125.3	135.0	140.6	139.8	141.4	144.3	148.4
Incomes of peasants	*(per capita)*	115.0	136.7	154.6	153.8	154.8	177.9	193.8	194.5	218.4
echoslovakia										
Incomes of population	*(per capita)*	112*	112.8	118*	126.5	129.7	132.1	133.9	137.1*	..
Incomes of workers and employees	*(per capita)*	..	111.6	..	124.3	126.8	129.4	131.8	134.5	..
Wages	*(per wage-earner)*	110.8	113.3	118.5	124.7	128.5	127.7	126.9	130.0	131.5
Incomes of peasants	*(per capita)*	..	114.1	..	129.8	137.5	137.0	136.4	144.1	..
stern Germany										
Incomes of population	*(per capita)*	..	127	..	152	..	158	..	..	..
Wages	*(per wage-earner)*	110.0*	123.5	136.1	143.3	148.4	148.7	151.1	155.8	162.0
ngary										
Personal income of population	*(per capita)* [cd]	..	..	..	100.0	101.2	105.5	113.7	120.8	120.8
Personal incomes of wage-earners	*(per capita)* [c]	122.1	129.9	138.9	141.7	142.1	146.1	158.1	167.5	167.9
Wages	*(per wage-earner)*	131.8	137.2	144.4	147.2	147.5	149.6	156.3	160.4	160.4
Personal consumption incomes of peasants	*(per capita)*	112.1	103.1	114.0	112.8	117.0	124.9	133.5	143.3	142.0

(continued on page 70)

TABLE 7.VI (*continued*)

Trends in real incomes of population, wage-earners and peasants, 1949 to 1965

Index numbers, 1955=100

Country and category		1957	1958	1959	1960	1961	1962	1963	1964	196
Poland										
Wages	(*per wage-earner*)	120.5	124.8	131.1	128.6	131.4	131.1	134.0	137.2	137.
Consumption income of peasants [e]	(*total*)	119	122	120	128	133 [f]	132 [f]	130 [f]	137	143
Rumania										
Wages	(*per wage-earner*)	121	126	134	148	153	160	168	171	181
Incomes of peasants	(*per capita*)	110	92	108	109*	..	..	..	..	..
Soviet Union										
Wages	(*per wage-earner*)	109	110	113	115	120	122	123	126	132*
Incomes of peasants	(*per working peasant*)	115	123	123	126	133	139	..	160*	179*

Sources: National statistics; plan-fulfilment reports; *Dvadeset godini sotsialisticheskovo stroitelstvo v tsifri*, Sofia 1964; *Rabotnichesko delo*, 3 July 1965 (Supplement); *Statistika*, No.4, 1965; *Wirtschaftwissenschaft*, No.1, 1964; *Revista de statistika*, No. 5-6, 1960; S. Taigar, *Veniturile populatiei si nivelul de trai in RPR*, Bucharest 1964; *Natsiolniat dokhod i zhyznenoto ravnishche v NR Bulgarya*, Sofia 1965; *Statisti* (Prague), No. 8, 1965; direct communication from the Central Statistical Offices Bulgaria and Czechoslovakia.

[a] 1948.

[b] In the socialist sector (productive sphere).

Excluding social benefits in kind.

[d] 1960 = 100.

[e] Incomes from agricultural activity only.

Including some awards and premia not previously included in the wage-fund.

CHAPTER 8

THE DETERMINATION OF INCOME FROM WORK: PRINCIPLES AND PRACTICES

INTRODUCTION

The final incomes of the population in the centrally lanned economies have been shown in the preceding hapter to consist preponderantly of personal income rom work. At their primary and nominal stage (before ny modification by taxation, social security or price olicy measures), these incomes occupy a central position the process of planning national production. This hapter therefore sets out to investigate the general rinciples governing the distribution of labour income, e objectives of income policies at the primary stage, nd the instruments used for achieving these objectives.

For the sake of convenience, personal incomes from ork are treated as comprising all primary incomes to bour, in the marxist scheme of national accounting .e. incomes accruing to individuals in the form of wages nd salaries in the productive sphere of the socialist ector, incomes arising in co-operative activity, mainly agriculture and handicrafts, and incomes from selfmployment in the productive private sector) as well as ages and salaries in non-productive branches and ervices — that is, incomes redistributed mainly via the ate budget. In analysing the process of income distriution in the centrally planned economies, it is important bear in mind the formal distinction that is always rawn between productive and non-productive sectors the economy, and between activities based on different roperty relationships — socialist, co-operative or priate — since it is those cross-sections of the economy at are used in the application of various income policy easures.

The implementation of policy decisions being largely ependent on various administrative arrangements and anding regulations for personal income distribution, uch of the chapter has been given over to a factual escription of their functioning and of the possibilities ey offer for planned intervention.

During the period under review, important changes ave taken place in the proportions of the various contituents of personal incomes from work — the share of age and salary earnings, for example, has increased all countries. The factors determining the global wage nd are therefore studied, as is the structure of the basic age and salary system, which is intended to guarantee ttainment of desired differentials in remuneration and promote labour movements in the interest of overall conomic productivity. The difficulties, partly inherent in e systems, of maintaining control over actual wage nd salary developments are illustrated in a section escribing the major postwar wage system reforms in the various countries studied. As far as available statistics permit, the pattern of actual differentials in wage and salary earnings has been analysed by economic sectors and branches, by major occupational groups, by sex and, where relevant, by regions. An attempt is also made, on the basis of more or less aggregate income distributions by size, to assess the degree of dispersion in wage and salary earnings in the various countries.

The system of labour remuneration in the co-operative sector of the economy is illustrated by reference to agriculture. Since co-operative farmers' incomes are only indirectly regulated by state authorities, emphasis in the section of the chapter devoted to them has been placed on price, fiscal and financial methods of determining farm income; the system used for the determination and differentiation of labour remuneration within the co-operative farms has been described mainly in terms of income from collective work. Unfortunately, lack of relevant data has prevented a statistical analysis of actual differentials and dispersion of incomes.[1]

Macro-economic aspects of planning income from employment are considered in the last section. An input-output model comprising four productive sectors[2] is used as a basis for investigating the relationships between changes in the allocation of resources by major categories of final demand and between total income from employment and the distribution of that income by major sectors. The interdependencies — in conditions of overall equilibrium — between private consumption, income from employment, productivity and average wages are accorded particular attention. Past trends in employment, productivity and wages (real and nominal) in the productive economy as a whole are also treated briefly, as are past changes in wages and productivity by major industrial branches.

It could be argued that the relevant question which the study contained in the present chapter should attempt to answer is whether systems of distributing income from employment in the centrally planned economies have fulfilled the main functions assigned to them. Have they, in short, succeeded in mobilizing and allocating labour in accordance with national economic needs, in stimulating the growth of national and individual productivity, in ensuring consistency between employment income and resource allocation? Yet, while such functions are mainly economic in nature, it is clear that no policy for distributing primary income can neglect considerations of social justice and equity. Without any precise knowledge of the criteria actually applied — or even of a coherent set of theoretical criteria — for choosing between social and economic aims, it is n possible to reach any general appraisal of the efficien of the systems along the lines entailed by the questi raised.

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[1] Income distribution in the private sector has been omitted from the study. A number of circumstances may be instanced in justification of this omission: in quantitative terms, the private sector is at present of minor importance in all the countries — agriculture in Poland being the main exception — the methods by which it is regulated present no particularly interesting features from the point of view of policy, and as such they have carried only a temporary character in a period of institutional changes; finally, statistical data are practically non-existent.

[2] The model is presented in the technical note to this chapter (Appendix 8.I).

The main purpose of the investigation has therefo been to throw some light on the functioning of the incom distribution systems in the centrally planned economi in the period of rapid economic growth under revie In addition, its findings may provide the backgroun against which the new problems of labour income distr bution that are bound to arise in the wake of the curren programmes of economic reform may be assessed.

8.1. THE GENERAL FRAMEWORK FOR DETERMINATION OF WAGES AND SALARIES

Throughout the distribution process the employment income of workers and employees in the socialist economy — whether in the form of primary incomes in the productive enterprise sector or of work remuneration redistributed via the state budget in the service sector — is primarily determined by central planning and regulation.

The many economic and income policy objectives that have to be attained in the course of employment income distribution render the planning of wages and salaries a complicated task. On the basis of qualitative and quantitative evaluation of labour input, planning has to provide the reward for, and at the same time to promote the productivity of, individual workers and employees. Further, without distorting the pattern laid down by the fundamental principles, planning should contribute to the establishment of earnings differentials between various categories of workers and employees and between sectors and branches, in such a way as to make possible manpower allocation in conformity with the needs of priority development schemes and overall productivity. Finally, planning ought to permit control over the relationship between growth of productivity and growth of labour costs, on which state accumulation depends.

At the macro-economic level, the size of the total wage bill in any given plan period is ultimately the result of the chosen economic development strategy and the balancing of major plan aggregates. This adjustment aspect of income planning is treated in a later chapter.[3] In this chapter, attention is centred on the planning of nominal wages and salaries at the sector and branch levels, which have the greatest bearing on the structure of earnings. The basic framework is provided by the centrally regulated wage systems and their standing regulations, which are described in more detail in the following sections. Once current wage and salary rates have been established, the planners' freedom in respect of the nominal wage fund is somewhat limited. In the short run, the major part of the wage fund is thus predetermined, and yearly fluctuations occur mainly as an automatic consequence of changes in the volume and structure of labour input and — to the extent that wages and salaries are tied to performance — of changes i levels of output. The linking of wages and salaries t productivity has in many ways complicated plannin procedures: it presupposes reliance on systems of indicators and norms which at the plan implementation stag ensure consistency with the planners' intentions. Th question of efficient indicators and norms has been, an remains, a constant preoccupation, and constitutes on of the most troublesome problems in maintaining centra control on wages and salaries, faulty connexions havin been at the root of many unwanted development requiring corrective action.

Although central planning and regulation is the decisiv determinant of the level and structure of wages an salaries, the influence of labour market conditions ha not been negligible. Manpower resources and plan requirements are thoroughly surveyed and the authoritie dispose of means for channelling labour flows, bu during most of the period under review labour movement have on the whole been relatively free.[4] At present 85 per cent of all recruitment is reported to take plac directly at the enterprises in the Soviet Union;[5] organize recruitment is limited to scarce categories of labour an to particular circumstances — the establishment of ne industries, large-scale enterprise conversion, or th launching of regional development schemes. Besides the vocational training system makes it possible to direc new entrants on the labour market according to needs

In any economic system the extent to which relativ levels of earnings govern the overall allocation of manpower is difficult to ascertain;[6] in this context the degre of strain or slack on the labour market is probably o some importance. In the centrally planned economies certain supply and demand relationships have alway been taken into account in establishing wage and salar rates according to the national importance of sectors branches and enterprises: the relative shortage of labou willing to accept arduous conditions of work in extractiv branches and construction in the early years of th eriod lead to successive upward adjustments in basic ates in several countries; and the abundant supply of nskilled agricultural and female labour has also pernitted recruitment at relatively low rates in certain ectors and branches. Moreover, the wage systems, in pite of their formal rigidity, do not entirely preclude nterprise management from offering certain wage and alary advantages in order to attract required labour.

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[3] See Chapter 10, where other elements of total income are also considered.

[4] For a discussion of relevant problems, see the *Economic Surve of Europe in 1957*, Chapter VII.

[5] See P. F. Petrochenko *et al.*, *Ekonomika truda*, Moscow 1965 p. 183.

[6] See *Wages and Labour mobility*, OECD, Paris 1965.

The organization of labour for the purpose of advancing ts material interests in opposition to those of employers as conceptually no place in the centrally planned econ-omies. The trade unions have nevertheless some func-ions in the field of employment income policy, and at he enterprise level such activity may affect the level and tructure of earnings — as is indicated in the conclusion f the section.

Vage planning

The macro-economic aggregate encompassing the mount of wages and salaries to be paid out in any articular plan period is the global wage fund. Planning f the wage fund is a highly intricate process, which can e disentangled only with difficulty from that of overall lan-building. It is not proposed to enter into a detailed ccount of the different stages involved (nor of all prob-ems which at various times and in various countries ave brought about changes in methods) but rather to eview the more salient features of the system that unctioned during most of the period under study.[7]

The general directives of the national economic plan re established for major sectors and branches. The nature f the problems arising in target-setting vary according o the complexity of production processes: for instance, abour input and remuneration is more difficult to plan n industrial activities with a highly diversified structure han in government administration and services. Although he point at which to break into the circle of the planning rocess is largely a matter of expository preference — practically any starting point being feasible — the ogical sequence of setting up wage-fund directives may e summarized as follows:

(i) establishment of production targets;
(ii) estimates of productivity;
(iii) derivation of employment targets on the basis of production targets and productivity estimates;
(iv) estimates of average wages based on the standing regulations of the wage system and estimates of productivity;
(v) establishment of wage-fund directives following from employment targets and estimates of average wages.

Targets are generally formulated in conjunction with a system of plan indicators designed to facilitate the istribution of tasks among economic agents and to ermit control over plan execution. Until the late 1950s the most common output indicators were (and still generally are) the following: gross production in industry and construction; commodity output in agriculture; total volume or value of turnover in trade; total turnover in ton/km in transport.

Methods for estimating productivity changes may run from extrapolation of past trends to the use of technically-justified normatives. At the sector and branch level, Soviet practice in recent years seems to consist in drawing up detailed estimates of the relative contributions expected from such factors underlying productivity gains as investments and technical progress, structural changes in production, better organization of work, reduction in the loss of working time, etc. Factors are classified in two categories: "technical" and "individual" — a distinction which becomes important at a later stage, when the problems of linking the average wage to productivity growth arise. Employment targets follow from analysis of the manpower requirements which the production programme entails. Productivity in whole sectors and branches is generally expressed as a ratio of global output (or turnover) to the number of production workers (in more recent years, persons employed).

The planning of average wages by sectors and branches involves, first, a thorough analysis of conditions in the reference period. On the basis of the standing wage-system regulations, the average wages which ought to obtain in average conditions of work (the skill structure of the labour force, the national importance attached to the respective sectors and branches, average degree of working norm fulfilment, where relevant, the effect of prevailing premia systems, etc.) are calculated and compared to prevailing wages. Adjustments are then made and the "corrected" average wages are utilized for projecting average wages in the following period, allowance being made for planned changes in basic conditions and productivity developments.[8] The values thus obtained serve in turn as a basis for correcting sector and branch differentials. Apart from increases in basic rates, the planners' scope for making direct adjustments to average earnings tends to be limited, although pressure for revisions of working norms provides leverage in sectors and branches where payments by results are extensively

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[7] These and related problems of planning have been dealt with in several earlier ECE publications. For a fuller treatment, see *Economic Planning in Europe*, ECE, Geneva, 1965.

[8] Practice in establishing productivity/average wage relationships may vary, but the following example (with arbitrarily chosen figures) from a Soviet source illustrates one procedure:

	Increase in average productivity	*Increase in average wages*
	Percentages	
Investments and technological improvements	3.0	1.0
Reduction in defective output and interruption of production	0.4	0.1
Reduction in loss of working time	1.0	1.0
Reduction in proportion of workers not fulfilling work norms	0.6	0.6
Reduction in proportion of auxiliary workers	3.8	0.3
Other factors	0.2	—
Total	9.0	3.0

Source: Planirovanie narodnogo khozyaistva SSSR, Moscow 1963, p. 470.

Only those productivity changes caused by factors on which the workers have direct influence justify proportionate wage increases. If other factors yield a certain increase, the explanation lies elsewhere — for instance, the introduction of new technology may require higher levels of skill.

applied. The final plan directives for the wage funds are established as the product of projected average wages and employment.

In the planning and counterplanning process, the general directives are transmitted up and down the hierarchy of administrative and intermediate executive bodies and enterprises until satisfactory consistency is reached. Contradictory requirements may lead to clashes of interests, which have to be resolved at each level and between levels. Thus, in making their plan proposals, the enterprises strive in general for low output targets, ample resources and an easy product mix.

The final plan targets are the result of a series of compromises and iterations. The wage planning process naturally includes a number of consistency checks of major balances, particularly the manpower balance and the balance of the income and expenditure of the population.[9] If employment targets fail to match available supplies of various categories of labour, formal consistency may be achieved through adjustments of production and productivity targets.[10] Correspondingly, if a target for the wage bill, taking into account all other money incomes of the population, appears to exceed the planned supply of consumers' goods and services, several alternatives can be taken into consideration for correction: the planners may choose to adjust average wage targets in the productive sectors; or investigate possibilities for increasing productivity (eventually by exercising pressure on working norms) or for reducing employment; or give up an initial aim of increasing basic rates in productive or non-productive sectors; or change output and/or foreign trade programmes.

Implementation and control

From a formal point of view, the general plan targets described above make up a consistent set. Moving down the planning ladder from central and administrative to executive levels, target-setting becomes progressively more diversified and complicated. At the enterprise level, the relative importance of the various targets may vary, but, in broad terms, global output and total wage fund constituted the most important operational targets during the period under review. These two indicators were intimately linked, in the sense that enterprises were allowed to overspend on their wage fund if actual output exceeded the plan target — the ratio between the respective growth rates being fixed below unity. Various regulations designed to control the size of wage-fund expenditures have been in force in the centrally planned economies during the period studied. In recent years, the rule in the Soviet Union appears to have been that an increase of one per cent in output warrants an increas in the wage fund of between 0.9 and 0.6 per cent.[11]

Administrative control over wage-fund expenditure is exercised by the local agencies of the State Bank on th basis of the approved production-financial plans of th enterprises. In practice, however, this control has bee rather weak, as the competence of the Bank barely goe beyond ensuring formal compliance with statutor regulations. In the course of plan implementation unforeseen changes and adjustments in enterprise production programmes often require a recalculation of th original wage fund targets; requests have then to b made to supervisory bodies for the issuance of ne instructions to the Bank. In cases of unjustified failur to keep wage-fund expenditures within authorized limits various sanctions can be brought to bear on management but financial penalties on enterprises appear on the whol to have been relatively unimportant during the period this may to some extent explain the general tendenc towards excess spending on wages. Another reason seem to have been that the financial authorities could hardl refuse, without creating disturbances, to release funds fo wage payments, if enterprises incurred obligations exceeding the amounts due on the basis of their productio performance.

When global output and the wage fund are the principal indicators, enterprises in practice have comparativel large freedom for manœuvre, either because they ca justify deviations from established targets, or becaus they are able to manipulate indicators so as to achiev formal consistency. The reasons for deviation may b many, and full enumeration here would be impossible. The wage-fund target may be exceeded, for instance because fulfilment of the output target required mor labour than foreseen; failure of deliveries from othe enterprises to materialize may mean that component have to be produced on the spot, rendering output mor labour intensive; the product assortment may change or, simply, organization of work may be deficien Alternatively, an increase in average wages may occu in consequence of unplanned changes in the structur of employment (requirements for higher skill or heavie working conditions), in work-norm fulfilment, or in th amount of supplementary payments for overtime, etc In countries where the global wage-fund targets includ premia payments, formal correspondence could also conceal overspending on the workers' wage fund, while no funds were left for premia to engineering and technical personnel, despite their entitlement. In recent years, distortions of the latter kind have, however, often been prevented by separating the two targets. In order to improve target relationships, enterprise management had sometimes to undertake revisions of work norms in order to hold average wages within the limits permitted by production performances; it could also be led deliberately to inflate global output by increasing, for instance, material input, or the share of deliveries from other enterprises or of work in progress. The refinement of output indicators in recent years has, however, significantly reduced the possibilities for such manœuvring.

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[9] See Chapter 10.

[10] A typical example occurred during the elaboration of the Soviet medium-term plan for 1959-1965. The first variant of the manpower balance showed that, at the proposed rate of growth of productivity in collective agriculture, the farms would not be able to release the labour force required by industry. The productivity targets had consequently to be revised on the basis of accelerated mechanization. See Report on the United Nations Seminar on Planning Techniques (Moscow, 8-22 July 1964), Document ST/TAO/SER.C/76, United Nations, New York 1966, p. 98.

[11] The relative share of wages in production costs seems to ha served as a basic criterion for the establishment of the percentage in coal mining, for instance, where labour costs accounted for abou 64 per cent of total production expenditures, the rate was 0.9 pe cent; in engineering, where they represented only 31 per cent, was 0.6 per cent. See P. F. Petrochenko *et al.*, *Ekonomika trud* Moscow 1965, p. 217.

The implication of the rule for changes in the productivity (— average wage (w) relationship can be expressed by the formul $\frac{dw}{w} = a\frac{dp}{P} + b(a-1)$, where ($a$) represents the given ratio betwee increase in wages and increase in output and (b) the percenta change in employment. It follows that the relationship is mo favourable in mining than in engineering, reflecting the great importance attached to the contribution of "individual" factors productivity change in the former than in the latter industr

[12] For fuller discussion of the subject, see *Economic Planning* *Europe*, ECE, Geneva 1965, Chapter VI, pp. 30-40.

The general tendency in all countries — at least in the earlier part of the period — was for global wage-fund expenditures to exceed targets mainly on account of higher than planned employment. The existence of a relatively abundant supply of unskilled labour may have contributed to this development; at the enterprise level, it manifested itself in the form of pressure for employment by job applicants, on the one hand, and, on the other, as latent demand for labour from management seeking to safeguard potential requirements. Provided global output targets were attained, the authorities also seem to have been inclined to prefer employment expansion to an increase in average wages within established wage-fund limits. Moreover, enterprises had no strong incentives to economize on wage-fund expenditures, since only an insignificant fraction of such savings could be utilized for their own purposes; and failure to take full advantage of authorized resources in one plan period could also easily lead to less generous allocations in the following period. In general, a comfortable wage fund has always tended to be an asset at the disposal of enterprise management.

The diverse measures taken in the various countries in more recent years, or since the late 1950s, have tended to diminish the central role of global indicators and to make enterprises more cost and productivity conscious. The general revisions of the indicator systems, and the devolution of responsibility for economic management to intermediate institutions[13] which have more opportunities for establishing adequate links between relevant indicators, have been important steps in this direction.

As an attempt to contain wage developments within planned limits, Hungarian experience of control over absolute average wages — a system introduced in 1957 — is of particular interest. Under this system, overfulfilment of the productivity plan did not justify an increase of the average wage.[14] Until 1964, total wage-fund expenditures appear to have developed more or less in conformity with plans, and overspending was exceptional; central reserves for wage increases could thus be used for their original purpose. Although the system had many positive features, it left few opportunities for rewarding productivity, and to some extent encouraged enterprises to hoard labour. In 1965 measures were introduced authorizing enterprises to utilize part of their wage-bill savings — resulting from smaller than planned employment — to increase average wages.

An experiment of similar character, although of short duration, was carried out in Czechoslovakia. In 1959 compulsory normatives for the ratio between the growth of average basic wages and productivity were introduced as a basis for wage-fund calculation in individual enterprises. In practice, the working of the system did not prove to be wholly satisfactory: the normatives applied only to basic wages, the major part of which consists of payments according to established wage and salary rates and is linked to output results only for piece-workers; and increases in earnings of managerial and technical staff continued to be dependent on premia payments, which fell outside the scope of the normatives. Another weakness was that the normatives were established for individual enterprises on the basis of past performance — i.e. it compared the enterprises only to their own previous record — and did not measure their relative efficiency within the given branch. Enterprise management had, moreover, no particular interest in reducing employment — during the two years that the normative system was in operation global output increased mainly on account of rising labour input.[15]

In general, it is probably true to say that the interest of planners in cost and productivity has increased in response to changes in economic structure and the level of economic development. During the industrialization drive of the early 1950s, most countries disposed of relatively large unexploited reserves — especially of labour and sometimes also of industrial capacity — and enjoyed comparatively high returns on marginal inputs of labour and capital; but scarcities were much more in evidence everywhere at the beginning of the 1960s, when questions of relative marginal costs, and of choice between factors of production, came increasingly to the forefront. This evolution has naturally been associated with the need for stricter control over the utilisation of labour and wage-fund resources in the interests of increased efficiency. As far as can be judged from the information at present available about the more comprehensive planning and management reforms currently being carried out in all the economies studied, the reforms seem to imply a policy that would tend to make the basic wage bill an integral part of production costs, on which the enterprises will have incentives to save in order to increase their premia funds. As for individual wage and salary earnings, the links with overall enterprise performance on the basis of a more rational system of indicators will be strengthened.[16]

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[13] See, for example, *Economic Planning in Europe, op. cit.*, Chapter VI, pp. 28-40.

[14] Although the main objective of this measure was control over wage-fund expenditures, the difficulties of establishing adequate productivity indicators seem to have been an additional reason for its introduction. In some branches, where the physical productivity of labour is relatively easy to measure, average wage control remained on a relative basis (0.2-0.4 per cent increase for each per cent overfulfilment of the productivity plan).

[15] See *Plánované hospodářství*, No. 11, 1961, pp. 1020-1031.

[16] See *Economic Survey of Europe in 1965*, Part 1, Chapter I, p. 58.

The role of the trade unions,[17]

Although employment income policies in the Soviet Union and the eastern European countries are defined and implemented within the framework of national economic plans, a number of important functions in respect of income determination nevertheless fall within the competence of the trade unions. The trade unions nowhere in the region constitute organized pressure groups of labour in general, or of particular categories of workers and employees; their activity has largely the character of active collaboration with the authorities in establishing income distribution systems which promote the implementation of plan objectives while at the same time safeguarding the social and economic interests of their members. The structure of the trade unions (which is in parallel with that of general administration and management, with special committees or sections at all levels of the national economy — from the workshop to the top planning echelons) is designed specifically for such collaboration.

With respect to income planning proper, the competence of the trade unions is in principle only consultative. It would be difficult to ascertain to what extent they exert a real influence on important decisions, but they represent in all circumstances a convenient means of communication, by which the authorities can obtain information about practical problems at various levels of plan implementation and also disseminate recommendations on wage and salary matters. Moreover, there is nothing to exclude active trade union leaders from playing an important role in discussions on employment income policy or income policy in general.

The trade unions participate directly in the elaboration of the central wage system regulations, which significantly affect the relative levels of wages and salaries. In the Soviet Union, for instance, the Trade Union Confederation collaborated very closely with the State Committee on Questions of Labour and Wages in working out the wage reform of 1956-1966. In Czechoslovakia, following a decree of 13 October 1963, the corresponding State Committee is legally bound to consider all wage-policy measures in agreement with the Trade Union Confederation. In Poland the trade unions are directly represented in the State Committee; the highest level of the organization has also some competence in concludin branch collective agreements.

In all countries, some important functions in connexio with labour inspection, social security, and especiall general social welfare of workers and employees hav been vested in the trade unions. They manage, fo instance, certain public services such as the organizatio of sports and leisure, tourism, administration of convalescent homes, holiday camps and enterprise canteens on the basis of their own financial resources accruin from members' fees.[18]

On the whole, the terms of reference mentioned abov hardly permit the trade unions to influence the tota volume of the wage bill, which may be considered a predetermined under given conditions of economi growth and productivity developments. Their interest i thus mainly concentrated on various technical aspects c distribution, e.g. forms and types of remuneratior working norms, wages and salary structures, liable t promote economic growth and productivity as prerequisites for increasing levels of earnings.

Even if the activity of the trade unions with respect t wages and salaries is carried out within the limits c central plans and standing regulations, their influenc at the micro-economic level may be significant. Bein constantly in contact with the workers' rank and fil who are naturally concerned with problems of maintaining and improving their material situation, local trad union committees might be inclined to urge condition leading to an expansion of wage funds beyond planne limits; the rather great autonomy of the enterprises i respect of job grading and working norms certainl leaves such possibilities open. On the other hand, th effects of such activities may have been fully counterbalanced by campaigns by the trade unions for the fulfilment of production and productivity targets.

Within the framework of the new system of economi planning and management which is at present bein introduced in all the countries studied, the role of th trade unions may be strengthened. With closer link between wage funds and net results of the individua enterprises, the trade union committees are likely t obtain some say in decisions on criteria for distribution, a is already the case in some countries in respect of existin enterprise-fund premia and profit-participation schemes

8.2. The Basic Wage and Salary System

Income from work in the socialist sector of the economy is to a large extent regulated by centrally established wage and salary systems. The details of these systems differ considerably from country to country in the area, but their underlying principles are everywhere the same; for the most part they derive from those laid down in the Soviet wage system as it was elaborated in the early 1930s. The guiding rule for labour income distribution in all the countries under study is "from everybod according to his ability and to everybody according t his work". The implementation of this principle (whic implies incentives to productivity) requires a purposefull designed wage and salary system, and presupposes tha it is possible to devise rational and consistent method for measuring the quality as well as the quantity of labou effort. Under the pressure of economic development suc premises have been severely tested, as built-in weaknesses of the system resulted in biased income/productivity elations which have had to be corrected.

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[17] The material under this heading has been drawn from a study prepared by the International Labour Office, as part of that organization's co-operation with the ECE secretariat in the research undertaken for the present study.

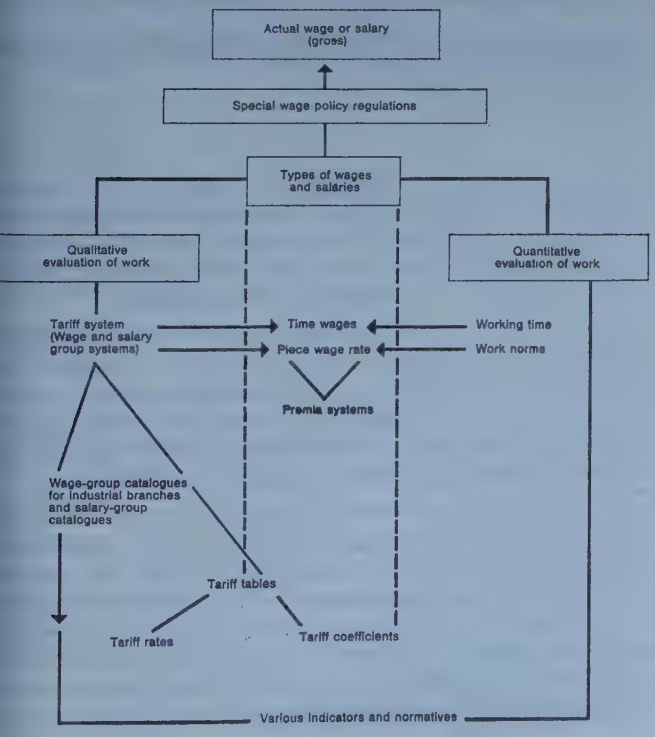
[18] Total administered finances may be quite considerable; in th Soviet Union and Czechoslovakia, members' fee-rates correspon to about one per cent of wage and salary earnings.

The essential element of the wage and salary systems —illustrated in Chart 8.1—are the tariff scales for ndustrial workers and for managerial and technical staff and other employees. The system provides a formal scheme for the qualitative classification of jobs throughout the economy matched, on the quantitative side, by regulations on working time and working norms. In planning, both sides are linked to various indicators and normatives, set so as to reflect the policy objectives and efficiency standards sought at a given stage of development. The actual wage and salary earnings of individual workers and employees depend on the rate for the job that they perform, on the type of remuneration under which they work, on various incentive and premia systems, as well as on special wage provisions for overtime, night work, etc. Basic rates and incentive pay are established according to much the same principles, whether they refer to manual workers or to salary earning managers, engineers, technicians and other employees; but since the different function assigned to these two groups in the production process affects the importance of individual elements in the remuneration system, the industrial *wage system* is treated separately, in what follows, from the *salary system* applying to managerial and technical staff and other employees.

It would be impracticable, within the limits of the present study, to give a comprehensive account of wage system developments in the different countries in the period under review. The systems were adjusted on several occasions, the major reforms taking place after the large scale revision begun in the Soviet Union in 1956. The more or less constant modification of the wage systems makes it difficult to specify their details at any given point in time, and in the following presentation emphasis has therefore been laid on some basic features of their functioning.

CHART 8.1

Schematic representation of the wage and salary system in centrally planned economies


Actual wage or salary (gross)
Special wage policy regulations
Types of wages and salaries
Qualitative evaluation of work
Quantitative evaluation of work
Tariff system (Wage and salary group systems)
Time wages
Piece wage rate
Working time
Work norms
Premia systems
Wage-group catalogues for industrial branches and salary-group catalogues
Tariff tables
Tariff rates
Tariff coefficients
Various indicators and normatives

(a) *The wage scales for industrial workers*

The basic wage scales are the corner-stone of the industrial wage structure. They consist of a number of labour grades which are expressed as multiples of the first (lowest) grade. The spread between the highest and the lowest grades, or the width of the scales, is mainly determined by the skill structure of the branch for which they are drawn up.[19] In the basic industries, scales are therefore generally wider than in the light industries. The rate of progression within the scales is defined by coefficients, which are usually so calculated as to guarantee absolute as well as relative increments in the ratios between grades.[20]

The wage scales provide a basis for classifying jobs throughout the economy in accordance with their degree of "complexity", the main problem being to reduce the various operations to a common denominator—i.e. the value of "simple" labour—performance of which requires no special training or experience.[21]

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[19] According to Soviet experts on wage problems, the comparative length of formal training and working experience required for the performance of the most highly skilled work in a given branch of industry is used as a guideline in determining the appropriate number of grades in the relevant wage scales. See Aganbegian and Mayer, *Zarabotnaya plata v SSSR*, Moscow 1959, p. 134.

[20] In the centrally planned economies the preference for progressively increasing labour-grade differences seems to spring from the view that such a scheme provides better incentives for skill improvement at the upper end of the scale, where scarcities have become very marked recently. Scales with equal increments were frequently applied in the Soviet Union in the early period of industrialization, when recruitment at the lower grades was most urgent.

[21] Several, more or less sophisticated, methods are used for job evaluation, and practice varies from one country to another. The points system applied in the Soviet Union for measuring the degree of complexity of the jobs on a 6-grade scale is illustrated below:

Functions and factors	Degree of complexity of function and significance of factor	Number of points *Minimum*	*Maximum*
Computation work	*Simple*	11	12
	Average	14	16
	Complex	19	22
Preparation and organization of the work and the work place	*Simple*	18	20
	Average	23	27
	Complex	30	36
Conducting the work process	*Simple*	144	163
	Average	186	213
	Complex	248	288
Servicing and controlling equipment	*Simple*	11	12
	Average	14	16
	Complex	19	22
Responsibility	*Not relevant*	16	18
	Relevant	21	24
	Very relevant	28	32

Tariff coefficients and total amount of points per grade

	I	II	III	IV	V	VI
Tariff coefficient	1.0	1.13	1.29	1.48	1.72	2.0
Minimum amount of points	—	201	227	259	297	345
Maximum amount of points	200	226	258	296	341	400

Source: R. A. Batkaev and R. I. Markov, *Differentsiatsia zarabotnoi platy v promyshlennosti SSSR*, Moscow 1964, p. 79.

At the plant level, jobs are related to labour grades with the help of job qualification manuals, which describe all typical and relevant occupations within each branch. A notable feature of the system is that it is the job which is graded, not the worker. The worker is assigned a personal grade after examination by a management committee, on which the local trade union is represented. Workers are paid for the jobs they actually do, however, although the system provides some guarantees for those who perform a job classified more than one grade below their personal grades.

The bare ratios of the basic wage scales acquire their true significance when they are tied into the general industrial wage structure by the attribution of a money value to labour grade I. Determination of this value involves considerations of inter-industry differences in conditions of work and takes into account the national economic importance of the branch in question. The resulting ratios for various countries between labour grade I in two extreme but typical branches are illustrated in Chart 8.2. In industrial branches where conditions of work vary widely, different values may be ascribed to labour grade I for diverse groups of workers, depending on the hardship, danger or unhealthiness of the job categories, although the ratios between labour grades generally remain identical with those in the basic scale. Different values for labour grade I are also established for piece-rate workers and time-rate workers, since the former are considered as being exposed to more exacting working conditions. In consequence, the overall spread of rates within a branch or an enterprise may be much greater than that specified by the basic wage-scale ratios.

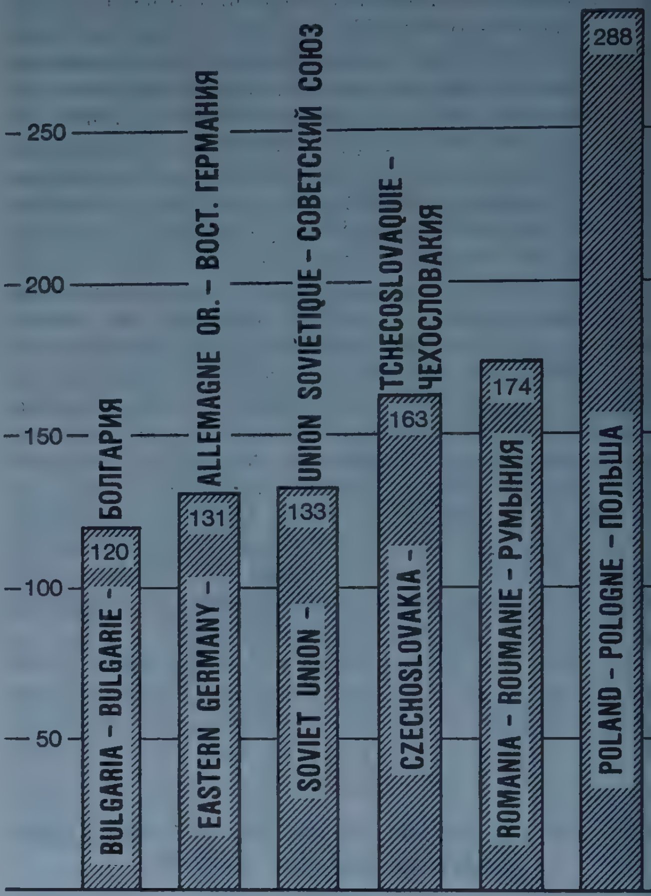
The data in Table 8.1 give an idea of the spread in basic rates — as determined by main criteria — in the current Soviet wage system, for a number of branches. Taking the chemicals industry as an example, tariff rates may vary by 32 per cent according to conditions of work, 13 per cent by type of wage, 2.3 times by skill, and 3.5 times in total. If a fourth element of the tariff system is taken into account, i.e. the regional coefficient (the maximum of which is 2.0), the ratio between the highest and the lowest rate in the chemicals industry would be 7:1. In the industrial sector as a whole the ratio would exceed 11:1.[22]

In all the centrally planned economies under study, except Hungary, industrial workers are paid on the basis of wage scales established on the pattern described above, and approved by the central authorities for each branch. The number of grades in the scales may vary, the most frequent at present being those containing 6 or 8 grades (see Table 8.2). Over the years the tendency has been t narrow the scales, as technical progress has resulted in levelling of the degree of "complexity" of work betwee branches. Only Poland would still seem to apply scale with as many as 17 different labour grades.

CHART 8.2

Ratio between first labour grade in the food industr and first grade in the coal industry (around 1962)

Tariff rate of first grade in food industry [a] *= 100*



Sources: V. P. Gruzinov, *Zarabotnaya plata v promyshlennosti sotsialisticheskik stran*, Moscow 1963, pp. 293-300 (for eastern European countries); *Voprosy ekonomik* No. 7, 1964 (for the Soviet Union).

[a] Textiles industry in Poland.

The spread within the scales for the main industria branches in the various countries is shown in Table 8.3 The widest ranges between the lowest and highest grade are found in the coal industry, mining and metallurgy i Bulgaria, Poland and the Soviet Union, and in engineerin in Czechoslovakia, eastern Germany and Rumania.

The average wage level in industry, as well as in it branches, is naturally much affected by the pattern o allocation of workers to labour grades. With no chang in basic scales, average wages can rise and fall with shift in the allocation. The distribution in 1965 of Sovie industrial workers by labour grades and current scale is shown in Table 8.4; 72 per cent of the workers wer paid according to the 6-grade scale, and in the wide

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[22] This represents the wage rate of a mechanic having labour grade VIII and working in a coal trust enterprise to which the maximum regional coefficient of 2.0 applies, as compared with the rate of a worker in the food industry with labour grade I. The ratio between extreme tariff rates in Czechoslovakia would seem to be about 4:1. In 1963 the minimum wage rate per hour was 3 Kčs and the maximum 12.10 Kčs (highest labour grade tariff in mining). By various supplements the latter could be raised by some 10-15 per cent, implying an extreme ratio of about 4.5:1. See Y. Průsa, *Zaklady Organisace Mezd*, Prague 1964, p. 20 and *Otazky a Opdovedi o Mzdach, Platech a Normovanie Prace*, Prague 1963, pp. 44-45.

TABLE 8.1

Basic factors affecting tariff rate differentiation in the Soviet Union

Industrial branch	Maximum spread of rates depending on			
	Level of skill	Conditions of work	Type of wage (piece or time rate)	All factors (excluding regional coefficients)
Coal industry	..	..	..	4.8
of which :				
a. shaft work	2.8	—	—	—
b. open-cast work	3.2	—	—	—
Iron ore mining	3.2	1.26	—	4.0
Ore mining (other)	2.8	1.26	—	3.6
Ferrous metallurgy	3.2	—	—	3.2
Non-ferrous metallurgy	2.6	—	—	2.6
Oil drilling	2.0	—	1.13 - 1.16	2.5
Oil refining	2.0	1.32	1.13	3.0
Chemicals (extracting)	2.6	1.31	—	3.5
Chemicals industry	2.3	1.32	1.13	3.5
Engineering and metal-working	2.0	1.22 - 1.34	1.06 - 1.17	3.0
Timber	2.0	1.12	1.09	2.5
Cellulose and paper	2.0	1.13	1.13	2.6
Wood-working	2.0	1.06 - 1.11	1.06 - 1.11	2.4
Cement	2.4	—	1.15	2.7
Leather	2.0	1.13	1.13	2.6
Textiles	1.8	1.10 - 1.13	1.10 - 1.13	2.4
Clothing and footwear	1.8	1.07 - 1.08	1.07 - 1.08	2.2
Food	1.8	1.11	—	2.0
Local dairy	1.8	—	—	1.8

Source: R. A. Batkaev and V. I. Markov, *Differentsiatsia zarabotnoi platy v promyshlennosti SSSR*, Moscow 1964, p. 47.

TABLE 8.2

Number of grades in the basic tariff scales of main industrial branches (around 1962)

Number of grades

Branch	Bulgaria	Czecho-slovakia	Eastern Germany	Poland	Ruma-nia	Soviet Union
Ore mining	7	8	6 7	17 15	6 8	8
Coal mining	..	8	6 7	17 10	6 8	7 8
Metallurgy	8	10	8	12	..	6 8 10
Engineering	8	8	8	9	8	6 8
Chemicals	7	8	8	8	8	6 7 8
Textile	9	8	8	16	8	6
Footwear	7	8	8	..	7	6 7
Leather	8	8	8	..	7	6 7
Food	7	8	8	7	..	6

Sources: V. P. Gruzinov, *Zarabotnaya plata v promyshlennosti sotsialisticheskikh stran*, Moscow 1963, p. 119; *Vestnik statistiki*, No. 3, 1966, pp. 92-93.

scales the representation of the lower grades is seen to be rather small.

Centrally established wage scales for industrial branches were abandoned in Hungary in 1957. Since then the level and structure of industrial wages have been regulated by central control of *average* wages, which are set as compulsory plan targets for the industrial ministries and in turn broken down by directorates and individual enterprises. A central wage table determines the limits within which the basic rates for various categories of skill, and for various conditions of work within the skill category, may range. The actual rate of a given worker is laid down at the enterprise level. Table 8.5 illustrates the differentiation of basic wages as practised in 1964; differentials according to skill stretched from 13 per cent below to 32 per cent above the industrial average rate; differentials according to conditions of work, from 10 per cent below to 13 per cent above. It should be noted that the Hungarian wage table indicates only the range of *basic* rates; as in other countries, actual earnings differentials are further dependent on incentive schemes, premia systems and regulations about other wage supplements.

(b) *The salary schedules for managerial and technical staff and other non-manual employees*

The salary schedules of managers, engineers, technicians and clerical, administrative and other non-manual employees are drawn up on broadly the same principles as the tariff scales for industrial workers. However, the

TABLE 8.3

Ratios between the lowest and the highest labour grades of current [a] tariff scales in basic industrial branches

Industrial branch	Range of tariff scale						
	Albania	Bulgaria	Czechoslovakia	Eastern Germany	Poland	Rumania	Soviet Union
Ore mining							
a. shaft	1 : 1.94	1 : 2	1 : 2.18	1 : 2.43	1 : 3.88	1 : 1.96	1 : 3.2 [h]
b. open cast	1 : 1.87	1 : 1.9	1 : 2.42	1 : 2.32	..	1 : 1.90	1 : 2.85 [i]
Coal mining							
a. shaft	1 : 1.99	1 : 2	1 : 2.18	1 : 2.42 [b]	1 : 2.00	1 : 1.95	..
b. open cast	1 : 1.84	1 : 1.9	1 : 2.37	1 : 2.02 [b]	1 : 2.79	1 : 1.90	..
Metallurgy	—	1 : 1.95	1 : 2.52	1 : 2.76	1 : 3.33	Group tariff grades	1 : 3.20 [j] 1 : 2.60 [k]
Engineering	1 : 1.70	1 : 1.81	1 : 2.41	1 : 2.14 [c] 1 : 2.78 [d]	1 : 3.53	1 : 2.26	1 : 2.00
Chemicals industry	—	1 : 1.80	1 : 2.42	1 : 1.77	1 : 2.15 [e] 1 : 2.29 [f] 1 : 2.48 [g]	1 : 2.06	1 : 2.60 [l] 1 : 2.30 [m]
Light industry :							
Textiles	1 : 64	1 : 1.70	1 : 2.27	1 : 1.54	1 : 3.08	1 : 2.09	1 : 1.8
Footwear						1 : 2.13	
Leather		1 : 1.71	1 : 2.17	1 : 1.52		1 : 2.20	
Food industry	—	1 : 1.50	..	1 : 1.46	1 : 2.00	..	1 : 1.8

Sources: V. P. Gruzinov, *Zarabotnaya plata v promyshlennosti sotsialisticheskikh stran*, Moscow 1963, p. 123; R. A. Batkaev and V. I. Markov, *Differentsiatsia zarabotnoi platy v promyshlennosti SSSR*, Moscow 1964, p. 65.

[a] Data for 1962; some modifications may have occurred since.
[b] Hard coal mining
[c] General engineering.
[d] Heavy engineering.
[e] Light chemicals industry.
[f] Heavy chemicals industry.
[g] Basic chemicals industry (exceptionally dangerous conditions).
[h] Ferrous ore mining.
[i] Non-ferrous ore mining.
[j] Ferrous metallurgy.
[k] Non-ferrous metallurgy.
[l] Mining work.
[m] Basic and auxiliary work.

TABLE 8.4

Distribution of industrial workers in the Soviet Union by labour grades (2 August 1965)

Percentages

Share and grade	Number of grades in wage scale 6	7	8	10
Proportion of workers paid according to the scale indicated . . .	72	11	6	1
Percentage shares of workers by corresponding grades				
I	12.4	2.0	6.7	0.1
II	22.4	12.4	5.3	1.4
III	29.5	16.8	12.4	3.4
IV	20.8	28.5	19.2	9.7
V	11.4	29.3	22.1	23.5
VI	3.5	9.0	22.8	24.7
VII	—	2.0	13.5	18.9
VIII	—	—	4.0	11.5
IX	—	—	—	5.4
X	—	—	—	1.4
Average labour grade	3.1	4.1	5.0	6.1

Source: Vestnik statistiki, No. 3, 1966, p. 92.

NOTE. — 10 per cent of the total number of workers are paid under other tariff conditions.

quite different — and very diverse — functions of these categories of employees (which are often difficult to classify) have led to recourse to separate criteria for differentiation of rates. Current practice also varies greatly between countries.

The central authorities generally issue salary schedules for each industrial branch, defining the functions of various salaried posts and indicating the relevant monthly maximum and minimum rates of remuneration. The basic criteria for drawing up the scheduled rates by branches are mainly as follows: the national economic importance of the branch and conditions of work in it; the volume, character and complexity of the production process (in enterprises, departments and production units); the functions and responsibilities of a given post, and the training and experience required of its occupant. Branch nomenclatures of posts are elaborated in accordance with a basic list; in most countries salary schedules are worked out separately for managerial and technical staff and for other non-manual employees. In the Soviet Union they are established by branches, or by groups of branches, for the former category; for the latter, there are only two central schedules — one for employees in heavy industry, construction, railways, maritime and air transport, and a second for all other branches.[23] Within the maximum and minimum limits indicated in the basic schedules, the management of a given enterprise sets the actual salary rate of each employee in accordance with his knowledge, experience and personal qualities. In most eastern European countries, the procedure for classifying salaried posts is similar. Comprehensive job qualification manuals for salaried posts at present exist only in Czechoslovakia[24] and eastern Germany.

The first, and difficult, stage in drawing up the schedules is that of setting the ratio between the salaries of various categories of non-manual employees and the wages of rank-and-file workers. Salary rates are generally keyed to the remuneration of the foreman who is, in a way, the functional link between the two universes. In the Soviet Union the salary rate of a foreman is most often set at a level some 10-20 per cent above that of a highly skilled worker. The practice would seem to be the same in the eastern European countries, although percentage ranges vary. Table 8.6 shows typical salary rate multiples in the engineering industry around 1962, but these data have to be considered as illustrative only, since it is difficult to ascertain to what extent indicated relationships are valid for industry as a whole in the countries listed. Moreover, salary rates for identical posts may diverge considerably according to the national economic importance of a given branch or enterprise. Everywhere, except in Hungary, industrial branches are classified for the purpose of establishing salary rates. There are six groups in Bulgaria and Czechoslovakia, seven in Rumania and three in Poland; in eastern Germany each branch has its own salary schedule; but in Hungary there is a unique salary schedule for industry as a whole. The level of branch rates is generally highest in heavy industry, and lowest in the food and local industries. Distinct enterprise categories are usually established with reference to such criteria as volume of output, number of workers, complexity of production processes, values of fixed capital assets, etc. Such enterprise classification mainly affects the personnel in leading positions.[25]

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[23] The basic Soviet list for managerial and technical staff contains the following twelve positions:

1. Director of enterprise
2. Chief engineer
3. Chief technicians or chief of leading production department
4. Chief of section
5. Chief of department (technical control, planning, supply, etc.)
6. Leading specialist of section
7. Chief of department (finances, personnel)
8. Senior foreman
9. Senior engineer
10. Foreman
11. Engineer
12. Technician

The schedule for other employees includes 5 categories of positions.

[24] In Czechoslovakia, since the reform of the wage system in 1959-1960, the basic salary schedule for managers, technicians and engineers contains 17 grades, with a spread in rates of 1:7.8. The schedule for other non-manual employees has 18 grades, with a spread of 1:6.8. The ratio between the rates of the first (lowest) grades in the two schedules is 1.33:1. See S. Bálek, *Mzdová diferenciace a preference v Československém průmyslu*, Prague 1962, p. 10.

[25] **Maximum deviations of salary rates by industrial branch (A) and enterprise (B) categories in eastern European countries (around 1962)**

Index numbers, lowest paid category = 100

Position	*Bulgaria*	*Czechoslovakia*	*Eastern Germany*	*Hungary*	*Poland*	*Rumania*
A.						
Director	139	181	199	..	119	140
Engineer	116	170	169	..	112	130
B.						
Director	148	136	148	131	205	168
Chief engineer	150	136	148	163	175	155
Chief of department . .	114	134	149	150	168	140
Engineer	118	100	122	100	100	100
Technician	114	100	—	100	100	100

Source: V. P. Gruzinov, *op. cit.*, pp. 148-149 and 156.

TABLE 8.5

Differentiation of basic wages according to skill and conditions of work in Hungary in 1964

Index numbers : total average rate of the respective categories = 100

Skill / Conditions of work	Unskilled work	Semi-skilled work			Skilled work		Total industrial average
		6 months' training	1 year's training	More than 1 year's training	With practical experience	With special knowledge	
Light manual work	88.0 91.5	97.0 93.5	110.0 95.5	120.1 92.4	139.7 99.5	139.2 95.5	100 90.4
Light manual work combined with some special non-manual activity	80.4 104.3	84.2 101.3	92.1 99.7	105.1 100.9	117.7 104.5	121.2 103.8	100 112.8
Normal manual work	85.3 98.4	94.0 100.6	101.9 99.2	114.9 98.1	128.1 101.2	137.8 104.9	100 100.3
Heavy manual work	91.7 110.6	100.0 111.9	108.0 108.7	117.6 104.9	122.3 101.0	125.8 100.1	100 104.9
Total industrial average	87.0 100	93.7 100	104.1 100	117.4 100	126.9 100	131.7 100	100 100

Source: Az ipari munkások munkakörülményei és bérhelyzete, Budapest 1966/3, p. 211.

TABLE 8.6

Ratios of salaries to foremen's pay in the engineering industry, circa 1962 [a]

Salary rate of a foreman = 1.0

Post	Bulgaria	Czechoslovakia	Eastern Germany	Hungary	Poland	Rumania
irector	1.76	2.94	1.92	2.07	1.85	2.00
hief engineer	1.71	2.61	1.90	1.83	1.67	1.88
roduction chief	1.54	2.36	1.57	—	1.59	1.53
epartment chief	1.52	1.88	1.28	1.35	—	1.47
enior engineer	1.14	—	—	—	1.04	1.31
ngineer	0.95	1.54	1.05	0.98	0.89	1.13
enior foreman	1.33	—	1.23	1.04	1.11	1.13
oreman	1.00	1.00	1.00	1.00	1.00	1.00
echnician	0.76	0.90	0.86	0.87	1.04	1.00
hief accountant	1.38	2.05	1.73	—	1.33	1.56
hief of finance section	—	—	1.17	—	1.26	1.25
conomist	0.86	0.90	0.98	—	0.89	0.81
enior accountant	1.00	—	—	—	0.67	0.66
ccountant	0.86	—	—	0.56	—	0.58
egal adviser	1.09	—	1.5	—	—	0.78
hief of personnel	—	—	—	—	0.85	0.95
echanic	0.55	0.60	0.5	—	0.35	0.48
harwoman	0.45	0.47	—	—	—	0.34
orker (highest paid labour grade)	0.94	0.94	0.64	—	0.78	0.75

Source: V. P. Gruzinov, *Zarabotnaya plata v promyshlennosti sotsialisticheskikh stran*, Moscow 1963, p. 146.

A fuller and more exact description would be: ratios between maximum salary rates of leading engineering-technical staff and administrative employees and maximum salary rate of a foreman working in enterprises of the highest category within the engineering industry of eastern European countries. The ratios have been calculated on the basis of corresponding salary schedules. (The source does not indicate exact reference years, but the data in general refer to schedules current around 1962.)

In the Soviet Union all enterprises, as well as their epartments, in a given industrial branch are allocated salary category. The number of categories varies beween five and seven.[26] In the coal industry, for instance, vith seven categories based on the daily output of coal, he rate for a manager in the highest category of enterrise is 70 per cent above the level established for the ame post in the lowest category.[27] This system of grading oes not, however, affect subordinate salaried personnel. 'hus, relative salary rate advantages enjoyed by industrial nanagement are substantial, particularly in large enterrises.[28]

(c) *The regulation of incentive and premia payments*

If the tariff scales and schedules constitute the basis for the differentiation of employment income in the socialist sector of the economy, they are not the only determinants. Other elements in the wage and salary system — such as incentive payments related to working norms, and premia — also have an important effect on differentials in final earnings. Some of these elements are taken into account when the tariff system is drawn up. For example, different levels of tariff are established for piece-wage and time-wage workers. Moreover, the levels of wage and salary rates are to some extent so determined as to make allowance for the possibility of remuneration exceeding the tariff rates. This is not surprising, given the marked preference in the planned economies for wage and salary payments linked to incentive schemes that are designed to promote productivity. This preference has lead to heavy reliance on payments by results and on various premia payments supplementing basic tariff earnings.

Incentive payments and premia in the wage sector

Although the types of wage payments in all the countries under study are very heterogeneous, they can be reduced to two fundamental, and familiar, categories — time wage and piece wages, but neither of these is commonly applied in pure form. A schematic illustration

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Monthly salary scales in roubles

Category of enterprise

ost	*1*	*2*	*3*	*4*	*5*	*6*	*7*
irector	300-330	250-300	220-260	200-230	160-200	150-170	100-140
ead of department (technical control, production)	200-240	180-220	160-200	140-180	130-160	as category 5	
ead of department (planning, employment, supplies)	150-180	140-170	130-166	125-155	110-140	as category 5	
ead of department (financial, sales, information)	130-150	130-150	120-145	120-145	110-135	as category 5	

Source: S. Kh. Gurianov, *Organisatsia oplaty truda v promyshlennosti SSSR*, loscow 1960.

[27] See A. S. Shkurko, *International Labour Review*, No. 4, 1964, . 358.

[28] Before the Soviet wage reform in 1956 differences in salary rates etween the director and the foreman of an enterprise could be -5 times, after the reform 3-3.5 times. See *Sotsialisticheski Trud*, lo. 11, 1958, p. 20.

of the combinations currently practised is provided in Chart 8.3.

Whenever practicable, piece wages have been the predominant form. Incentive wages appeared most efficient in the early phases of Soviet industrialization, when priority was given to maximization of physical output and when large contingents of poorly trained workers were brought into the labour force. Piece-working was for long believed to stimulate the personal material interest of the worker in the results of his work, to promote the acquisition of skill, and to lead to better use of tools and equipment. The share of wage-earners on piece-work in Soviet industry grew steadily from 18 per cent in 1920 to about 77 per cent in 1956, when wage reform brought a change in emphasis; the share has since declined and stood at 58 per cent in 1965, as may be seen from Table 8.7. The development in the eastern European countries was similar. Data are not available for systematic analysis, but Table 8.8 provides some information for the years around 1960. The importance of piece-working seems at present to be greatest in Bulgaria, data for which are given in Table 8.9. In most countries, about one-half of all industrial workers are paid at piece-rates, although the percentage share has clearly been declining in recent years. In Hungary, the concept of piece-working appears to be broader than elsewhere and the available data — e.g. in Table 8.10, showing the distribution of workers in state industry by wage types — are not quite comparable. Between 1959 and 1964 the total number working on efficiency schemes hardly changed, but there was a certain decline in t
proportion of those paid at piece-rates in the narrow
sense.

The extensive use of piece-working has given rise
many problems of control of wage levels and wa
structures in the centrally planned economies. The ef
ciency of piece-rates, as a mode of labour remuneratio
largely depends on the so-called "work norms" to whic
they are related. These norms define the working ti
(including breaks) necessary for the manufacture of
unit of product, or for carrying out a definite task.
The piece-rates can be calculated as "straight" or "pr
gressive" (only rarely "degressive"); in the former cas
earnings increase in direct proportion to productivit
in the latter, as a function of the degree of norm fulfilmen

The basic principle of piece-rate determination is th
a "normal" worker, working at a "normal" pace, shou
earn a "normal" wage. The difficulty obviously consis
in defining the norms. Given the importance of wor
norms for earnings, correct wage relationships cann
be established unless efficiency standards are the sam
for all workers. Identical "tension" in working nor
ought to be reflected in a more or less uniform degree
average norm fulfilment in the various industrial branch
of a given country. As national statistics show, th

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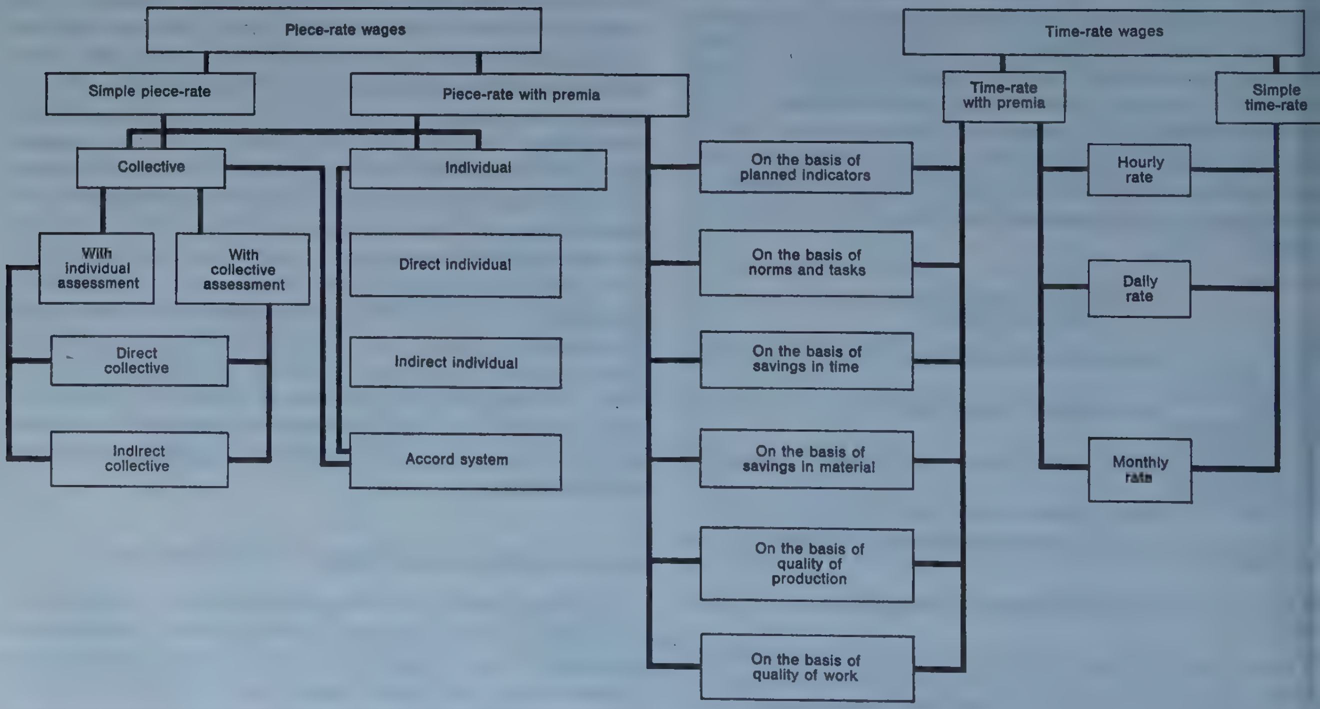
[39] For a detailed description of the various types of norms appli
in current Soviet practice see V. F. Petrochenko, *et al.*, *Ekonomi
truda i oznovy normirovaniya*, Moscow 1965, pp. 95-101.

CHART 8.3

Classification of forms and types of wages


Piece-rate wages
Simple piece-rate
Piece-rate with premia
Collective
Individual
With individual assessment
With collective assessment
Direct collective
Indirect collective
Direct individual
Indirect individual
Accord system
On the basis of planned indicators
On the basis of norms and tasks
On the basis of savings in time
On the basis of savings in material
On the basis of quality of production
On the basis of quality of work
Time-rate wages
Time-rate with premia
Simple time-rate
Hourly rate
Daily rate
Monthly rate

Source: S.I. Schkurko, *Formy i sistemy zarabotnoi platy v promyshlennosti*, Moscow 1965, p. 49.

TABLE 8.7

Distribution of industrial workers according to type of wage in the Soviet Union

Percentage shares of total numbers

Year	Piece-rate workers				Time-rate workers		
	Total	Simple system	Premium system	Progressive premium system	Total	Simple system	Premia system
otal industry							
1954	*77.2*	42.2	—	35.0	*22.8*	9.0	13.8
1961	*63.0*	32.3	29.7	1.0	*37.0*	6.4	30.6
1962	*60.5*	26.9	33.2	0.4	*39.5*	5.5	34.0
1965	*57.6*	23.2	34.1	0.3	*42.4*	4.6	37.8
ower industry							
1962	*5.7*	3.1	2.6	—	*94.3*	5.0	89.3
1965	*3.5*	1.9	1.6	—	*96.5*	3.0	93.5
errous metallurgy							
1962	*58.0*	14.2	41.4	3.2	*41.2*	2.1	39.1
1965	*58.0*	12.5	43.1	2.4	*42.0*	1.8	40.2
ngineering and metal-working							
1962	*56.4*	40.2	15.5	0.7	*43.6*	3.5	40.1
1965	*54.4*	35.4	18.5	0.5	*45.6*	2.8	42.8
of which :							
Tool-making							
1962	*59.3*	50.1	8.9	0.3	*40.7*	3.2	37.5
1965	*57.6*	41.8	15.4	0.4	*42.4*	2.6	39.8
ight industry							
1962	*83.3*	30.7	52.6	—	*16.7*	5.3	11.4
1965	*81.4*	23.1	58.3	—	*18.6*	4.5	14.1

Sources: Vestnik statistiki, No. 3, 1966, pp. 95-96.

bjective has rarely been attained, although the situation as improved in more recent years.

Methods of "norm setting" are crucial for the control f the relationship between earnings and productivity n the centrally planned economies. In broad terms, wo basic categories of norms are commonly in use: a) the "empirical-statistical" norms derived from obserration of practice, and (*b*) "technical-scientific norms", which are based on precise work study, involving a horough analysis of the work process and measurement f the time necessary under normally prevailing producion conditions. Until 1950 "empirical-statistical" norms were the rule in all countries. They were generally stablished centrally. Later, the responsibility for "norm etting" was transferred to the enterprises and the indusrial ministries, with the aim of adapting the norms more losely to the specific production conditions in the various ranches. The "technical-scientific" norms have grown n importance over the years, and in most countries the nnual plans of the enterprises now include a target or implementing such norms. The scientific approach o norm setting does not solve the whole problem, however. In the absence of correspondingly flexible wage-rate setting practices, the working norms have often to be adapted at the enterprise level so as to guarantee the piece-workers a certain level of average earnings; sometimes norms are set too "loose", thus distorting desirable differentials between piece-rate earnings and time-rate earnings; sometimes too "tight", thereby impairing the desired incentive effect.

Throughout the area, deficient norm setting has been a cause of serious distortions in the skill differentials laid down by the basic wage scales. When, for example, the piece-earnings of unskilled and semi-skilled workers considerably exceeded the time-rates of skilled workers, little incentive was left for the acquisition of higher skill. Moreover, owing to different rates of technical progress, piece-earnings in some industries or enterprises continually rose faster than in others; they therefore became more attractive centres of employment, although the needs for labour might have been, or were, more urgent in other branches. Such examples abound and it would seem that the resultant problems were at the root of the wage system reforms carried out in the Soviet Union

TABLE 8.8

Piece-workers as proportion of all workers in industry

Percentages

Industrial branch	Bulgaria 1960	Bulgaria 1962	Czechoslovakia 1957	Czechoslovakia 1960	Eastern Germany	Eastern Germany 1960	Poland 1959	Poland 1961	Rumania 1957	Rumania 1960	Soviet Union	196
Total industry	80.4	71.2	59.0	46.0	..	..	55	49	74.8	48.9	..	30.
Coal mining	58.5	..	64.0	36.0	..	78.5	..	..	64.0	34.5	..	49.
Power industry	1.1	0.2	10.0	2.0	..	—	..	..	9.0	4.5	..	5.
Metallurgy a. Heavy	60.6	52.8	57.0	42.0		74	..	..	73.0	41.5	..	58.
b. Light	52.3	39.8			..	..	..	..	..	..	..	..
Chemicals industry	59.7	59.1	41.0	31.0	..	29	30.8	..	62.2	22.2	..	36.
Heavy engineering	79.5	64.9	61.0	44.0	..	70	45	33	80.2	47.3	..	56.
Textiles	82.7	71.4	—	—	..	77.2	67	67	75.0	47.9	..	66.

Sources: V. P. Gruzinov, *op. cit.*, pp. 173, 175; and *Vestnik statistiki*, No. 3, 1963, pp. 95-96.

and the other eastern European countries after 1956. These reforms, which are discussed in section 8.3 below, tended everywhere to re-establish control on differentials by increasing the share of tariff rates in total earnings, and to check excessive piece-earnings by introducing tighter norms.

An inter-country comparison of average industrial norm fulfilment is hardly meaningful, as concepts of "normal" fulfilment vary. In Bulgaria, Rumania and Czechoslovakia the general concept appears to be that average fulfilment should not exceed 115-120 per cent, in Hungary and Poland — 100 per cent.[30] With respect to differentiation of wage earnings, it is not only the actual increase in the average degree of norm fulfilment — determining to some extent the gap between earnings of piece-workers and time-workers — which is important; the diverging rates by which norm fulfilment increases in various branches may also lead to great disparities in earnings within the universe of piece-workers prope The data in Table 8.11 illustrate the situation with regar to norm fulfilment in some major branches of the Sovi industry before and after the reform. A clear tendenc towards greater concentration around the industri average is noticeable in most other countries. The nor setting system itself is continuously exposed to centr fugal forces, however, in spite of continuous revision The problems involved are general and difficult to solv neither centralized nor decentralized methods for th establishment of norms have been able to cope wit them; in most countries efforts seem at present to b directed towards the elaboration of centralized inte branch "normatives" for guidance and control.

In most countries the importance of piece-working ha diminished in more recent years and "progressive rates have been given up [31] in favour of "straight" rate

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[30] See V. P. Gruzinov, *op. cit.*, p. 60.

[31] In the Soviet Union "progressive" piece working has virtual disappeared, as data in Table 8.7 show. In Bulgaria (see Table 8. it would still seem to be of some significance in certain branche

TABLE 8.9

Distribution of industrial workers by type of wage in Bulgaria, 1962

Percentage shares of total

Industrial branch	Piece-rate workers				Time-rate workers		
	Total	Simple system	Premia system	Progressive premium system	Total	Simple system	Premia system
Total industry	*71.2*	65.0	3.8	2.4	*28.8*	4.5	24.3
Power	*0.2*	0.2	—	—	*99.8*	12.3	87.5
Fuel	*46.2*	19.4	1.9	24.9	*53.8*	3.6	50.2
Ferrous metallurgy	*52.8*	19.1	23.5	10.2	*47.2*	0.2	47.0
Non-ferrous metallurgy	*39.8*	18.2	6.2	15.4	*60.2*	2.7	57.5
Engineering and metal-working	*64.9*	64.0	0.7	0.2	*35.1*	2.5	32.6
Textiles	*71.4*	68.2	3.1	0.1	*29.6*	2.3	26.3
Clothing	*94.0*	89.1	4.9	—	*6.0*	2.9	3.1

Source: Direct communication from the Bulgarian Central Statistical Office.

TABLE 8.10

Distribution of workers by wage types in Hungarian state industry

Percentages

Wage type	Total 1959	Total 1964	*of which:* Mining	Electric power	Machine building	Chemicals	Textiles	Textile clothing	Food
ime wages	46.3	45.8	45.1	51.9	56.5	71.6	44.2	20.1	49.4
iece wages	35.7	33.6	36.9	1.2	26.0	17.0	45.2	78.2	33.0
ccord wages	18.0	20.6	18.0	46.9	17.5	11.4	10.6	1.7	17.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statisztikai időszaki közlemények (Central Statistical Office, Budapest), Vol. 41, p. 193 and Vol. 82, p. 196.

Iowever, the policy is not to abandon piece-working but ather to prevent abuse. Replacement of piece rates by ime rates is thus favoured in industries with highly utomated, or continuous and strictly regulated, producion processes; in production units where quality control s particularly stringent; and in types of work which nvolves experimental and individual operations, where t would be economically impractical to prepare techically justified performance and output standards. echnical progress will by itself lead to a gradual increase n the proportion of time-rated jobs, however. In highly nechanized operations, the main part of a worker's job ends to consist in supervising automatic processes and djusting and maintaining the machines. When the level f output is determined by the productivity of equipment, nd not by that of an individual worker, piece rates ease to be effective. This is already the case in the etroleum, power-generating and chemicals industries, where time-working applies to almost all workers. The extent of the switch from individual to collective piece-rate payments is due to the wide-scale mechanization of production processes, the introduction of integrated plant, and the development of flow-line production — as, for instance, in the coal industry, ore mining, metallurgy and the timber industry.

Simultaneously with the limitation of excessive piece-work earnings, there has been a tendency in all countries to extend the application of premia payments as supplements to piece wages as well as time wages. Payment of such premia (which may be individual or collective) is linked to fulfilment of defined qualitative or quantitative indicators of performance. Certain ceilings are usually stipulated for individual rewards (in the Soviet Union 20-40 per cent of basic wages, depending on the industrial branch). Premia payments to workers are financed from the enterprise wage fund, a practice which often incites

TABLE 8.11

Average percentage fulfilment of work-norms by industrial branches in the Soviet Union

Industrial branch	Average percentage of norm-fulfilment: Before revision	After revision	Oct. 1963	Ratio of branch to total industry: Before revision	After revision	Oct. 1963
Total industry	169	118	120	1.0	1.0	1.0
of which :						
Ferrous metallurgy	137	113	115	0.81	0.96	0.96
Non-ferrous metallurgy	142	116	115	0.84	0.98	0.96
Coal	123	106	106	0.73	0.90	0.88
Oil	134	129	127	0.79	1.09	1.06
Engineering and metal-working	209	186	133	1.24	1.07	1.11
Chemicals	158	115	120	0.93	0.97	1.0
Wood-working	170	118	120	1.01	1.0	1.0
Building materials	144	116	113	0.85	0.98	0.94
Textiles	146	110	111	0.86	0.93	0.93
Clothing	155	113	113	0.92	0.96	0.94
Fishing	171	117	118	1.01	0.99	0.98
Meat and dairy	157	107	—	0.93	0.91	—
Baking	134	111	—	0.79	0.94	—
Paper and printing	184	112	—	0.97	0.95	—

Source: Batkaev and Markov, *op. cit.*, p. 198.

TABLE 8.12

Importance of premia payments in major industrial branches in the Soviet Union, 1962

Group and wage-type	Total industry	Ferrous metallurgy	Non-ferrous metallurgy	Coal industry	Engineering and metal-working	Chemical industry	Wood-working	Light industry	Food industr
Workers									
(a) Share of workers paid by premia system (as percentage of total)	67.2	80.5	82.7	96.4	55.6	81.2	65.4	64.0	68.9
of which :									
piece-workers	33.2	41.4	32.0	48.6	15.5	21.4	47.1	52.6	39.8
time-workers.	34.0	39.1	50.7	47.8	40.1	59.8	18.3	11.4	29.1
(b) Average size of premia (as percentage of basic tariff pay) . .	9.6	12.9	13.8	14.7	8.8	12.5	5.7	7.7	5.9
of which :									
piece-workers.	7.4	12.2	14.5	18.3	3.9	7.5	4.7	6.0	5.4
time-workers.	13.3	14.2	13.2	9.4	16.7	15.5	8.7	12.0	6.6
Engineers-technicians									
Average size of premia (as percentage of total basic salaries) .	11.2	14.4	16.0	7.4	11.3	17.1	4.0	9.1	7.2

Source: Batkaev and Markov, *op. cit.*, p. 212.

cautious management to plan maximum utilization of the legally admissible amounts.

In recent years the number of workers potentially qualifying for premia seems to have been growing in all countries; in 1965 about 72 per cent of industrial wage-earners in the Soviet Union received premia, as compared to 60 per cent in 1961 (see Table 8.7 above). On average, premia in that country amounted to about 9.6 per cent of basic tariff wages in 1962, as shown in Table 8.12; for industry as a whole, it was almost twice as important for time-workers[32] as for piece-workers, but conditions vary considerably by branches.

Premia payments to salaried employees

Managerial and technical staff, as well as clerical and other employees, are usually paid monthly salaries. To enhance performance, the basic rates — as established in the salary schedules — are to a varying extent supplemented by premia payments, the incidence of which is largely determined by the functions of a given category of employees in the production process. Within the heterogeneous group of salaried employees, the establishment of indicators for incentive schemes presents many delicate problems.

Premia payments are generally financed — as mentioned above — from a collective enterprise fund, the size of which is determined by reference to some overall economic indicators of enterprise activity.[33] Disregarding the complexities of calculating the enterprise fund, it is sufficient for present purposes to recall that, in all cou tries until the late 1950s, the basic indicator for prem fund allocations was the fulfilment or overfulfilment the gross output plan. When attention was transferr to qualitative aspects of enterprise performance, oth indicators for the release of premia resources we established. On the pattern of the Soviet scheme intr duced in 1959, the fulfilment of cost-reduction plans h become one of the most commonly applied indicators. all countries some additional conditions have also to met for premia regulations to become operative. The conditions vary considerably, not only from count to country, but also between branches and enterpris within one country; they are, moreover, subject to co stant change, and important modifications are expect in connexion with current planning and manageme reforms.

The main purpose of premia payments being to pr mote enterprise efficiency, premia to top management a generally based on the same indicators as those for prem fund allocations; but salaried employees in subordina positions receive premia related to the performance the department or shop to which they are attached. some countries, such as the Soviet Union, Bulgari Czechoslovakia and Poland, lists of managerial a technical posts to which premia should apply are esta lished by branches. In eastern Germany and Rumania t entitlement lists are to some extent left to the manageme of the enterprises themselves. In Hungary the industri ministries stipulate only the total number of employees their enterprises (generally about 30-40 per cent of t staff) to whom premia may be paid in a given year.

In all countries the premia funds now appear under separate heading in the overall wage-fund plan of t enterprise, instead of, as earlier, forming an integrated pa of them, a practice which had several inconveniences:

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[32] Straight time wages apply at present to only a small percentage of workers; for instance, 4.6 per cent in the Soviet Union in 1965, and 4.5 per cent in Bulgaria in 1962.

[33] For an account of the general situation, the interested reader is referred to *Economic Planning in Europe* (*Economic Survey of Europe in 1962*, Part 2), pp. 35-42.

me — although rare — cases, the enterprise management as able to manipulate basic wage payments so as to aximize the share of premia to managerial and technical aff; more commonly, however, the planned basic wage nd target was exceeded at the implementation stage, id the resources left for premia payments were too small - have any incentive effect. In most countries the aximum admissible level of individual premia is stated ; a percentage of basic salaries, although in eastern ermany it seems to take the form of a fixed amount. he percentage shares may vary, depending on the nportance of the relevant branch or enterprise category; eilings generally fall within the range of 40-60 per cent. he percentage shares also rise in relation to the functional nportance of positions. This would seem to be true for l countries, except Bulgaria, where the percentage is ie same at all levels within the same enterprise in order › avoid excessive earnings differentials; the premia eilings for the three basic groups of enterprises in that ountry are 40, 50 and 60 per cent, respectively.

In the Soviet Union the average size of premia pay- ients to managerial and technical staff and other em- loyees amounted in 1962 to about 11 per cent of their asic salary fund (see Table 8.12 above). Information on ie composition of the salary fund in Czechoslovak ndustry for a series of years shows that the increase in the share of premia payments has been severely checked:[34] in 1957 such payments amounted to some 15 per cent of the total wage fund of managerial and technical staff, but their share had decreased to about 8 per cent in 1963; for clerical staff it had been insignificant in recent years. Somewhat similar data[35] for Poland, referring to 1962, show a much larger share of premia payments in the total earnings of both engineering-technical and administrative-clerical personnel: about 28 per cent for the former, and 9.5 per cent for the latter category.

8.3. THE MAJOR POSTWAR WAGE SYSTEM REFORMS

In the preceding section the basic and more formal eatures of the functioning of the wage and salary systems ı the centrally planned economies were described. These ystems, it was observed, contain many elements which ave to be kept under constant control in order to nsure planned regulation of average earnings and ifferentials at various levels of the economy. *Ex-post* nalysis of the composition of the global wage fund ccounts enables the authorities to assess the effect on ctual developments of different wage and salary com- onents, and access to the corresponding statistics would bviously be invaluable for the present study; such data, owever, are not published in sufficient detail to permit comprehensive and systematic international com- arison. Still, the fragmentary information available for eriods when unplanned wage-system developments ompelled intervention provides enough material for iscussing the difficulties met in maintaining control f wage structures. This section therefore deals with the arge-scale reforms of wage systems which have taken lace in all the countries under study in the period since 956.

By the mid-1950s the central wage and salary systems n the Soviet Union and the eastern European countries o longer assured full control over actual wage develop- nents. The systems' built-in tendency towards "drift" ad not been checked, and various distortions of the vage structure had become manifest.

The share of the tariff rates in actual earnings had harply declined in the face of excessive piece-work earnings, due to "loose" working norms, abusive application of "progressive" rates, and various premia payments. Most elements of the wage system — especially the tariffs and the work norms — remained unchanged for long periods and tended to become obsolete in relation to technological and organizational changes in production. In these circumstances, enterprise management had often to improvise new rules or to re-interpret old regulations. Working norms had to be lowered, or at least held at their actual level, and resort was had to various subterfuges, such as putting time-workers on fictitious piece-work or awarding premia which had no bearing on real performance or productivity. Further inconsistencies arose from the fact that priority branches had more opportunities for "bargaining" for wage-fund resources than non-priority branches. It was easier, moreover, to check on work norms in mechanized industries than in industries where manual processes predominated. In some instances the earnings of certain categories of salaried staff entitled to premia had risen disproportionately in relation to those of other employees and manual workers; and in other instances earnings in senior management remained too low to offer incentives for accepting responsible posts. In sum, irrationalities permeated the system at all levels and seriously threatened to disrupt the pattern of wage differentials laid down in basic wage scales and salary schedules. From the planners' point of view, the system was unable to fulfil its function of promoting skill and productivity; nor could available manpower resources be rationally allocated when wage differentials were to a great extent determined

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[34] **Premia payments to engineering-technical and administrative-clerical employees in Czechoslovak industry**

Index numbers, total respective wage funds = 100

	1955	*1957*	*1959*	*1961*	*1962*	*1963*	*1964*
Engineers and technical staff							
Basic and complementary salaries, excluding premia	85.2	83.4	91.2	89.4	91.7	92.6	89.2
Total premia	14.8	16.6	8.8	10.6	8.3	7.4	10.8
Administrative and clerical staff							
Basic and complementary salaries, excluding premia	89.8	88.5	95.9	94.7	95.9	96.7	94.8
Total premia	10.2	11.5	4.1	5.3	4.1	3.3	5.2

Source : *Statistical Yearbooks*, 1963, p. 176; 1964, p. 182; 1965, p. 203.

[35] **The structure of salary earnings in Polish socialist industry by type of payments was as follows in September 1962:**

	Technical staff	*Office personnel*
Total earnings	100.0	100.0
of which : Basic wages	75.9	88.2
Premia and supplements	21.3	8.5
Fringe benefits	2.8	3.3

Source: *Statystyka Przemyslu*, 1962.

spontaneously. Finally, as for income distribution, the spread between maximum and minimum earnings of particular categories of workers and employees was often unjustified, being sometimes too small, sometimes too large.

The need for an overhaul of the wage systems — and for some adjustment of income policies themselves — was recognized in all the countries of the area; and the reform movement started in the Soviet Union in 1956 was followed in the other countries at various dates. One feature of the wage revisions was common to them all — namely, the endeavour to increase the share of basic tariff rates in total earnings — but in other respects each country tended to devise its own procedure. In the Soviet Union the reform was carried out by groups of industries in four stages, in Bulgaria and Rumania in three stages. In Czechoslovakia it took place simultaneously in all branches, the salary schedules of managerial and technical staff being revised first. In eastern Germany and Poland the wage revisions began in the chemicals and engineering industries and are still going on. In Bulgaria, eastern Germany, Rumania and the Soviet Union emphasis was laid on improving the tariff rates of the lowest paid categories; in Czechoslovakia the reverse approach was chosen. In Hungary the increase in rates was about the same for all categories of workers. In Poland, maximum and minimum rates were set, in order to facilitate the introduction of technically justified working norms without lowering actual earnings. Because of their varying importance and many particularities, the various reform programmes are briefly described country by country, below.

Soviet Union

The Soviet reform — begun in 1956 and stretching over the last ten years [36] — was a vast undertaking aimed at rationalizing the structure and administration of the whole system of wages and salaries. A State Committee of the Council of Ministers on Questions of Labour and Wages was established in 1956 and became the main executant of the reform.

On the eve of the reform, the basic wages of piece-workers in such important industries as engineering and metalworking, steel and chemicals constituted only one-half of their total earnings.[37] For time-workers the share was about three-fourths, but nearly 77 per cent of all industrial wage earners worked on piece-wages (production workers — 95 per cent; others — 55 per cent),[38] to a large extent with progressive rates. Fulfilment of work-norms was high, at about 140 per cent in heavy industry as a whole.[39]

The objectives of the reform were numerous, but in essence tended to re-establish central control on differentials by geographical regions, sectors, branches and sk categories of workers; to eliminate inequities; and, at t same time, to narrow the spread of earnings. The mea of attaining these aims were various.

First, the share of basic wages in the total earnings piece-workers had to be increased to about 70-75 per ce and in those of time-workers to 80-85 per cent — the being considered levels at which efficient control cou be maintained. This was generally achieved by lifting t tariff rates and by reducing the opportunities for suppl mentary earnings from over-fulfilment of work norms ar premia. The share of "scientific-technical" work norm adapted to the technical progress achieved,[40] was raise to about 70-75 per cent in the basic and heavy industrie to 44 per cent in engineering and to 65 per cent in textiles. The changes in the structure of the workers' wage-fur in the Soviet industry as a whole and by major branche between the two years 1957 and 1961 are illustrated Table 8.13. The share of basic tariff payments rose fro about 56 to 73 per cent, the correction being especial marked in the engineering and textiles industries. Th share of payments for overfulfilment of norms wa compressed from 24 to 8 per cent by the tightening working norms, and the supplements for progressive rate which constituted 5 per cent of the total wage fund 1957, were practically eliminated.

The basic wage scales themselves were thorough streamlined. The number of scales, which in industr as a whole amounted to some 1900 before the refor were reduced to 10; the number of skill grades withi the scales was generally lowered from 8 to 6 and th spread narrowed from about 1:2-1:4 to 1:1.8-1:2. To some extent, however, the latter aspect of the refor merely legitimized a *de facto* situation, since there ha been a tendency on the part of enterprise manageme to over-grade workers; the removal of one or two grad had therefore relatively little effect on actual wage di persion.[43] Industrial wage differentials are to a lar extent a function of the proportions of workers employe on piece-rates and on time-rates respectively. The refor tended to reduce the proportion of piece-rate worker which had increased continuously up to the mid-1950 At the same time the wage-cum-premium system usually linked to a system of individual or collecti premia payments for the fulfilment of specific indic

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[36] The reform was completed in heavy industry in 1959, in light industry in 1960, in transport, communications and state farms in 1962, and in the education, health and service sector in 1966.

[37] See e.g. F. I. Kotov, *Voprosy truda v semiletnem plane*, Moscow 1960, p. 167.

[38] See *Voprosy truda*, Vol. II, Moscow 1959, pp. 77-80.

[39] See *Sotzialisticheski trud*, No. 5, 1960, p. 9.

[40] Apart from imperfect adaptation to technical progress, t existence of "loose" norms could often be ascribed to the attem of enterprise management to assure a certain level of earnings their workers (see I. Karpenko, "Tarif ili premia", *Ekonomicheska gazeta*, No. 2, 1965). One Soviet wage expert goes so far as to cla that "the establishment of work norms had in practice become means for regulating wage differentials" (see L. S. Blakhma *Voprosy proizvoditelnosti truda i oplaty truda v period stroitelst komunizma*, Leningrad 1964, p. 122).

[41] See V. F. Mayer, *Zarabotnaya plata v periode perekhoda komunizimu*, Moscow 1963, p. 2.

[42] See V. P. Gruzinov, *op. cit.*, p. 27.

[43] For all industrial workers, the share of the first two grad hardly exceeded 3 per cent in 1956; after the reform this share we up to 33 per cent (in engineering, the corresponding figures we 1.4 and 53 per cent, and in construction 1.5 and 50 per cent). S V. F. Mayer, *op. cit.*, pp. 152-153, and F. I. Kotov, *Problemy tru i zarabotnoi platy*, Moscow 1963, p. 292.

Structure of the workers' wage-fund by industrial branches, before and after the wage reform, in the Soviet Union

Percentages of the total wage-fund

Industry and year	Tariff payments			Payments for overfulfilment of norms	Supplements for progressive rates	Premia			Supplements according to regional coefficients	Other wage payments
	Total	of which to: piece-workers	of which to: time-workers			Total	of which to: piece-workers	of which to: time-workers		
Total industry										
1957	56.3	*39.6*	*16.7*	23.9	5.0	5.8	*2.7*	*3.1*	—	9.0
1961	73.0	*42.6*	*30.4*	8.0	0.2	7.4	*3.5*	*3.9*	4.9	6.5
Non-ferrous metallurgy										
1957	59.8	*36.7*	*23.1*	15.2	6.1	4.3	*1.7*	*2.6*	—	14.6
1961	58.6	*26.1*	*32.5*	3.8	0.1	8.2	*4.1*	*4.1*	17.1	12.2
Petroleum industry										
1957	68.9	*33.4*	*35.5*	6.3	5.0	6.7	*2.6*	*4.1*	—	13.1
1961	71.2	*13.0*	*58.2*	1.5	0.5	9.1	*1.1*	*8.0*	7.4	10.3
Engineering and metal-working										
1957	52.1	*35.3*	*16.8*	30.9	1.7	5.7	*1.2*	*4.5*	—	9.6
1961	72.5	*40.0*	*32.5*	11.0	0.2	7.3	*2.0*	*5.3*	3.1	5.9
Chemicals industry										
1957	57.3	*35.9*	*21.4*	18.6	3.7	9.9	*3.9*	*6.0*	—	10.5
1961	73.3	*26.0*	*47.3*	4.5	0.1	9.1	*2.2*	*6.9*	4.2	8.8
Paper industry										
1957	50.6	*42.2*	*8.4*	20.9	14.6	5.0	*3.8*	*1.2*	—	8.9
1961	69.0	*40.0*	*29.0*	6.6	0.7	9.2	*4.7*	*4.5*	7.2	7.3
Textiles industry										
1957	56.3	*46.3*	*10.0*	21.1	13.0	3.2	*1.8*	*1.4*	—	6.4
1961	81.8	*53.4*	*28.4*	5.2	0.3	7.2	*3.7*	*3.5*	0.2	5.3
Clothing industry										
1957	64.9	*53.8*	*11.1*	26.2	3.1	1.2	*0.3*	*0.9*	—	4.6
1961	84.9	*71.2*	*13.5*	7.5	0.1	4.6	*3.5*	*1.1*	0.2	2.9
Meat industry										
1957	64.2	*47.0*	*17.2*	20.6	3.6	2.6	*1.6*	*1.0*	—	9.0
1961	84.3	*52.0*	*32.3*	7.2	0.2	4.3	*2.3*	*2.0*	0.1	3.9

Source: Batkaev and Markov, *op. cit.*, pp. 221-222.

tors — was introduced more widely for both piece-rate and time-rate workers.

The impact of the changes in modes of remuneration on average wage differentials by industrial branches must have been considerable, as the data in the table below, relating to the year before the reform, seem to suggest. Coal mining and metallurgy, for instance, owed their leading position to advantages in basic rates and premia, payments for overfulfilment of norms in these branches being below the overall industrial average. In engineering, on the other hand, overfulfilment of norms was of paramount importance, whereas basic rates and premia remained below average.[44] In light industry, where total earnings were about one-fourth below the average for total industry, benefits from premia were nevertheless relatively high.

Source of average earnings by industrial branch, 1955

Index numbers, total industry = 100

Branch	*Total earnings*	*Basic wage*	*Premia*	*Overfulfilment of norms*
All industry	*100*	*100*	*100*	*100*
Ferrous metallurgy	129	110	229	87
Non-ferrous metallurgy	144	125	149	104
Coal mining	162	141	299	66
Oil industry	111	115	109	54
Chemicals	101	82	162	81
Power plants	99	83	112	106
Engineering	104	81	85	152
Building materials	90	87	67	91
Wood processing	84	83	59	96
Paper	107	81	244	96
Light industry	78	71	108	78
Food industry	75	72	59	71

Source: A. G. Aganbegian and V. F. Mayer, *Zarabotnaya plata v SSSR*, Moscow 1964.

By and large, the increase in the number of time-workers, the elimination of progressive premia, and the revision of working norms introduced a more uniform composition of earnings among industrial branches. Inter-industry relationships were also rationalized by the reduction of the number of first grade rates from about 2,000 to 30. The system of regional differentiation of wages was also simplified.

As for the structure of salaries, great efforts were made to eliminate inequities resulting from wide differences in rates for essentially similar jobs. Prior to the wage reform every industry had its own schedule, and there was hardly any co-ordination between industries. As part of the reform the schedules were to a large extent systematized and links were established with the structure of workers' wage rates. Excessive premia payments to managerial and technical staff were curbed by the 1959 regulations, which stipulated ceilings of 60 per cent of basic salaries in priority branches and 40 per cent in others.

Rumania

The Rumanian wage reform was announced
December 1956, and closely resembled the Soviet pr
gramme. The reorganisation of the industrial wage syste
was practically completed in the period 1957-19
Wage scales were simplified and the ratios between e
treme labour grades reduced. The share of basic wag
in total earnings was raised[45] by upward adjustments
tariff rates, which were relatively more important in t
lower grades than in the upper grades.[46] At the same ti
the ratio between the extreme rates of the first labo
grades in the industrial branch scales were reduced fro
a ratio of 1.91: 1 to 1.76: 1. The total share of worki
hours paid at piece-rates declined from 75 per cent
about 49 per cent and average norm fulfilment in sta
industry, which before the reform stood at 160 per ce
(with wide fluctuations by branches: 217 in engineeri
— 127 in food industry) was brought down to abo
117 per cent at present (varying by branches betwe
110 and 125).

The last phase of the reform in Rumania concentrat
on adjustments of the differentials between wage-earne
and salaried staff, in favour of the latter. Basic salari
of foremen in engineering, for instance, which at be
equalled those of workers in the skilled categories, we
increased by about 12 per cent in 1959, and a different
of 20 per cent was established in 1961.[47] Similarly, t
salary rates of enterprise directors were raised in relati
to subordinate staff and, more generally, the basic rat
of managerial and technical personnel were better attun
to qualifications and responsibility. At the same tim
the relative importance of managerial premia was reduce
although they still make up a large part of total earnin
On the whole, these adjustments did not alter the gene
tendency towards a reduction in the spread of ba
salaries: in 1956 the ratio between the salary of a direct
and that of the lowest paid employee in an engineeri
enterprise of the highest category is reported to have be
8.9:1; by 1963 it was down to 5.8:1.[48]

Czechoslovakia

The sector and branch differentiation of wage ra
introduced after 1951, when the unified industrial wa
scale system was abandoned, never functioned in Czech
slovakia as intended; great discrepancies occurred

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[44] In engineering 27 per cent of total earnings was derived from payments for overfulfilment of norms and 6 per cent from premia; the corresponding figures for coal mining were 9 and 17 per cent. See A. G. Aganbegian and V. F. Mayer, *op. cit.*

[45] From 62 to 81 per cent in the industry as a whole; from 68
82 per cent in mining; from 46 to 77 per cent in engineering; fr
60 to 81 per cent in the light industry and from 79 to 84 per cent
the food industry. See Simon Taigar, *Veniturile populatiei si nive*
de trai in RPR, Bucarest 1964, p. 103.

[46] **Increments in basic tariff rates in Rumanian industry**

Percentages

	Labour grades		
	Lower	*Medium*	*Upper*
Engineering	13-20	11-12	9-10
Woodworking	12-14	9-10	8-9
Light industry	11-13	10-11	8-10
Building materials	10-11	8-9	8
Timber	14-16	8-11	6-8

Source: V. P. Gruzinov, *op. cit.*, p. 40.

[47] See S. Taigar, *op. cit.*, p. 109.

[48] See S. Taigar, *op. cit.*, p. 119.

TABLE 8.14

Distribution of the wage fund of industrial workers in Czechoslovakia by type of wage payment

Percentages

Type of payment	1957	1958	1959	1960	1961	1962	1963	1964
ogressive piece wage payments	3.8	2.1	—	—	—	—	—	—
raight piece wage payments	60.9	57.8	53.7	39.8	37.0	35.5	33.8	33.8
me wage payments	13.3	16.0	21.2	36.1	37.5	38.5	39.7	39.2
emia to workers with progressive piece-rates	0.4	0.2	—	—	—	—	—	—
emia to workers with straight piece-rates and time-rates	9.3	11.3	12.7	10.7	11.2	11.5	11.5	12.4
arious wage supplements	12.3	12.6	12.4	13.4	14.3	14.5	15.0	14.5
otal wage-fund	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Statistical Yearbook, 1963, p. 175; 1964 p. 181.

ates for similar jobs in different sectors and branches. he fact that basic rates remained unchanged at a low vel while actual earnings became more and more de-endent on supplementary payments for overfulfilment f norms and on premia caused additional difficulties. he criteria for such payments had largely to be invented *d hoc*, so as to guarantee adequate average wages and laries, regardless of their influence on efficiency.

Measures were taken in 1955 to revise work norms and end abusive application of premia regulations. In 956-1957 discussion of a general revision of the wage nd salary system started in connexion with the 1958 lanning reform. Central directive planning of wages was elaxed at the same time as control of the wage-fund as tightened by the introduction of wage normatives nked to increases in productivity. The major features f the wage system reform were completed in the period 958-1960.

One of the first objectives was to increase the share f the tariff element in total earnings, the desired level eing indicated as 75-80 per cent for piece-workers and 0-90 per cent for time-workers. The tariff rates were hus adjusted in relation to actual average wages. In ontrast with the situation in most other countries, owever, the main problem in Czechoslovakia was to ncrease skill differentials.[49] On average, tariff rates in ndustry as a whole were raised by 75-85 per cent: for the ower grades by 50-55 per cent, for the medium ranges y 75-85 per cent, and for the upper grades by 85-105 er cent.[50]

The wage scales were widened, and unified by sectors and branches; new job-qualification manuals were elaborated. Simultaneously, a campaign was launched for "technically justified work norms" and "economically justified premia".[51] Table 8.14 indicates some effects of the reform measures on the composition of the wage fund of industrial workers by main types of wage payments. Nevertheless, the 1958-1960 wage reform does not seem to have brought the results on wage and salary differentials that had been hoped for. According to recent statements by Czechoslovak wage experts, the problem of "correct" differentiation of income from work will have to wait for a solution within the framework of the new system of planning and management, which pre-supposes a theoretical clarification of many economic political and sociological questions.[52]

Hungary

The pre-1956 wage system in Hungary had similar weaknesses to those in the other countries studied: the job qualification system on the basis of wage scales did not fulfil its function and the lowest grades were gradually depleted. Piece-working was extensively applied and obsolete working norms were turned into arbitrary "wage multipliers".[53] Consequently, nominal wages

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[49] The following quotation from a declaration of Mr. Novotny ould seem to be highly relevant: "The basic difficulty arises from e fact that, except in a few branches, our wage system as a whole oes not differentiate wages according to skill. Even if we have no eneral shortage of qualified workers and technicians, we have to rengthen the wage differentiation by skill in our new system in rder not only to maintain the present, relatively high qualification of ur workers and technicians, but also to raise it to a higher level in e interest of technical progress and great productivity of labour." ee *Prace a mzda*, No. 11, 1959, p. 25.

[50] See V. P. Gruzinov, *op. cit.*, p. 40. The following data on piece-orkers' earnings in heavy engineering illustrate actual developents up to 1958:

Percentage change in actual earnings by labour grade in Czechoslovak industry
1955 = 100

I	II	III	IV	V	VI	VII	VIII
95.7	109.1	113.3	114.9	114.7	109.5	108.6	107.1

Source: H. Hronsky, *Odmena za praci v CSSR*, Prague 1960, p. 160.

[51] The data below show clearly the drastic changes in average percentage fulfilment of working norms in Czechoslovak industry, after 1959:

	1955	*1959*
Percentage fulfilment of work norms (by hours actually worked)	172	190
of which :		
Below 100 per cent	4.1	4.5
100.0-119.9	13.4	11.2
120.0-149.9	20.9	13.9
150.0-199.9	36.2	30.1
above 200.0 per cent	25.4	40.3
	1960	*1963*
Percentage fulfilment of work norms (by hours actually worked)	109	112
of which :		
Below 90.0 per cent	10.1	7.7
90.0-99.9	13.6	9.3
100.0-109.9	36.1	32.0
110.0-119.9	22.1	24.2
120.0-129.9	10.7	14.2
above 130.0 per cent	7.4	12.6

Source: Statistical Yearbook 1964, p. 182.

[52] See M. Horalek, "Problematika mezd v nove soustave", *Politika Ekonomie*, No. 4, 1965; and *Hospodářske Noviny*, No. 16 1965, p. 5.

[53] To quote a Hungarian source: "The sky was the ceiling in norm fulfilment by individual stars who — with the help of better

increased rapidly, but at rates varying widely from one branch or job to another, the engineering industry setting the pace in the wage drift. General revisions in norms were used to correct disproportions in earnings, but proved to be mere palliatives. The 1956 events gave rise to a real wage explosion.

After consolidation in the early months of 1957, the government proceeded to a major wage system reform on quite different lines from those in all other countries. Central regulation of tariff rates by means of industrial wage scales and job qualification manuals was abandoned. Enterprises were allowed freely to select appropriate wage setting forms (time-rates, degressive piece-rates, piece-rate with a maximum, time-rates with a premium etc.), to establish job qualifications and to adjust norms. Basic wage rates were increased and since then regulation takes place only by reference to a general wage table (see Table 8.5 above), according to which the branch ministries establish maxima and minima for various skill grades and various conditions of work. Respect of wage relatives is enforced by means of central control of average wages, which are set by the State Planning Commission for each industrial ministry and passed down to subordinate units.

The advantages of control of average wages were essentially as follows. Since enterprises were compelled to avoid wage drift, they had to adjust their wage setting methods either by using degressive piece-rates or piece-rates with a maximum, or by constant revision of working norms. Inter-industry wage relatives could thus be determined by the planners within a fairly modest margin, rather than by manipulation on the part of the enterprises. Within the enterprises, wage relatives could be established by the manager assisted by a special tariff committee and the competent trade union, taking into account such factors as experience, quality of work, discipline, etc. However, the new wage system also had certain disadvantages: it limited the scope for rewarding gains in productivity, especially when the planned increment in the average wage was small; and at the same time it offered certain incentives to enterprises to hoard labour, even in circumstances of general labour scarcity. But these disadvantages stemmed from the very premise of the system — namely, that average-wage control should be absolute, an overfulfilment of the productivity plan being no justification for an increase in the planned average wage. The introduction of such strict control was justified by the impossibility of adequately measuring workers' productivity at the enterprise level. In order to stimulate collective effort in each enterprise, a system of profit participation [54] was elaborated as a complement to control of the average wage.

Except for some minor adjustments, the system average-wage control remained unchanged in the peri 1957 to 1964. Some wage drift reappeared in 196 however, narrowing the scope for improvements of wa relatives that had been decided. In 1965 a new campai for norm revisions was launched and, at the same tim enterprises were authorized to allocate part of the savings resulting from smaller than planned employme to increasing average wages.

On balance, the 1957 reform would seem to ha brought quite satisfactory results in respect of worker wages, particularly in industry, but fewer advantag for managerial and technical staff. As part of the gener salary increases in 1957, enterprises were asked to inclu in basic salaries two-thirds of the average premia pa in recent years, and an attempt was made to end th practice of regarding the premium as a normal compone of the salary. Although this attempt met with only parti success, the quantitative importance of premia wa nevertheless greatly reduced. No further major change basic salaries occurred until 1962. By that time, it wa fairly obvious that the existing system did not sufficient reward experience and professional competence, sin differentials were almost exclusively determined hierarchical considerations and by the relative importan of the enterprise. Consequently, in that year regulatio were somewhat relaxed; the range of salaries for identic skill categories was widened and enterprises were entitle to give 2 per cent of their employees "privileged" salarie with a maximum of 3,500 forints per month.[55]

East Germany

The centrally regulated wage system in east Germa was no more immune from distortions in the pattern earnings than elsewhere. At a quite early stage the sam anomalies as in other countries appeared: a decreasi share of basic wages as a consequence of excessive wor norm fulfilment [56] led to disruption of established sk and inter-branch differentials. Opportunities for correcti intervention were, moreover, restricted by the gener labour shortage, aggravated by large-scale migratio In addition, the problem of income distribution had tw aspects: on the one hand, there were undesirable differe

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equipment, better prepared work and sometimes even auxiliaries not accounted for — managed to fulfil their norms to several hundred per cent" (*Közgazdasági szemle*, No. 2, 1958, pp. 162-175).

[54] According to *A munkások helyzete az iparvállalatoknál*, p. 147, about 30 per cent of all workers received profit participation payments in 1959. In the same year they amounted, on average, to about 16 days' average wage, but their importance appears to have declined in subsequent years (9.3 days' wage in 1963). See *Közgazdasági szemle*, No. 3, 1965.

[55] These "privileged" salaries are granted without promotio For "privileged" salaries between 3,500 and 5,000 forints, approv is required from the branch ministry, for those exceeding 5,0 forints, from the Council of Ministers.

[56] In socialist industry average norm fulfilment increased fro about 125 per cent in 1954 to 160 per cent in 1961 (see *Die Einhe* No. 11/12, 1961, p. 1655). The table below illustrates the situati by branches in 1956 and 1961:

Percentage fulfilment of piece-rate norms
A. Average fulfilment
B. Percentage of workers fulfilling norms at a level above 200 per cent

	1956		*1961*	
	A	***B***	***A***	***B***
Total centrally administered industry	135.1	2.6	160.3	15.3
Coal mining	116.0	0.1	128.1	0.3
Ore mining	134.2	2.6	156.6	12.2
Chemicals industry	130.0	1.0	147.0	2.8
Heavy engineering	145.3	4.2	187.8	30.8
General engineering	149.2	6.0	189.2	39.4
Light industry	132.6	1.5	145.8	3.9
Food industry	121.5	0.2	139.0	1.7

Source: Die Einheit, No. 5, 1962, p. 35.

als between socio-economic groups to the disadvantage industrial workers, and, on the other, the internal age structure had slipped out of control. A general age reform[57] was begun in 1958 in connexion with the nal de-rationing of consumers' goods.

Raising the share of the tariff element in actual earnings as a particularly important problem in eastern Germany. he expected increase in labour productivity, combined ith wage increases, would have resulted in a serious age inflation, if the work norms had not been drastically vised. It was therefore decided to allocate the supplements payable after the suppression of rationing, and ter wage increments, in the form of fixed sums, thus ecking the multiplying effect of payments for excessive orm fulfilment.

The chemicals industry was the first branch in which a omprehensive "wage programme" was carried out, account of its privileged place in the national economic evelopment plans. New wage categories, especially ppropriate to chemicals production processes, were troduced. Piece-rate wages were to a large extent placed by "premia wages", consisting of a relatively gh tariff wage and a premium dependent on fulfilment such indicators as quality of products, specific conmption of raw materials and energy, etc. In July 1959, emia wages were introduced for about 70 per cent of e production workers in the chemicals industry, and e spread in the basic wage scale was reduced from 2.4 to 1: 1.7.

In the new wage system for the chemicals industry, gional wage differentials based on the size of localities ere suppressed and enterprises were instead classified two categories according to their importance. In other dustries, regional advantages were substantially reduced rough differentiation of wage supplements.

As for work norms, an attempt was made in 1962 to ansform payments for overfulfilment of norms into xed amounts, which in 1964 were turned into premia. lore recently, enterprise management has been given tensive rights to establish its own forms of wage and ilization of the wage fund.[58] In accordance with the ew planning principles, wage adjustments tend to tablish closer links between labour remuneration and terprise results.

Poland

Polish experience with the tariff structure of wages has been marked by similar difficulties to those described for neighbouring countries. As a result of the wage-rate freeze up to 1956, the variable elements of earnings (supplements for overfulfilment of "loose" working norms, premia payments) caused undesirable differentials to appear. By means of piecemeal corrective measures, attempts were made to prevent further deterioration, but it was only in the early 1960s that a systematic overhaul of the entire wage system was undertaken. The programme included revisions of basic scales, a tightening of work norms, reduction of piece working, the replacement — where possible — of individual rates by group rates, and the unification of job nomenclatures. On account of the high costs of an immediate overall reform, the decision seems to have been taken to proceed by branches, as in eastern Germany.

The revision started in the engineering industry in 1961. The number of labour grades in the new basic wage scale remained at 9, as before, but the spread was considerably increased. Maximum and minimum rates were established for each skill grade, the discrepancy being greater at the upper end of the scale.[59] The reform was extended to the building and food industry in 1962, and is proceeding in other branches.

Bulgaria

A general reform of the industrial wage system in Bulgaria took place in three stages in 1960. The spread between the extreme skill grades in the basic wage scales, which was already relatively small, was further narrowed. Some restrictions were put on the application of pieceworking; the number of workers on piece-rates in industry as a whole declined from 79 per cent in 1959 to 74 per cent in 1961. Average norm fulfilment had in the same year been brought down to about 127 per cent, but has increased in more recent years and stood at 135 per cent in 1964.[60] Data in the table below on the structure of the workers' wage fund in state industry provide a measure of the impact of the reform measures; as can be seen, the decrease in the share of progressive piece-rate payments since 1959 has been quite considerable.

Composition of the wage fund in Bulgarian state industry, 1957-1963

Percentages

	1957	*1959*	*1961*	*1963*
Total wage fund	100	100	100	100
of which :				
Progressive piece-rate payments	15.6	14.5	4.7	3.1
Straight piece-rate payments .	45.1	46.4	52.3	47.2
Premia-rate payments.	—	—	—	3.8
Time-rate payments	25.6	23.3	28.4	31.1
Other supplementary payments	13.7	15.8	14.6	14.8

Source: Direct communication from the Bulgarian Centra Statistical Office.

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[57] The principles of the wage reform, which was implemented over period of years, can be summarized as follows:
neral improvement of the wage system and reduction of fferentials between wages paid on an hourly or monthly basis d wages paid on a piece-rate basis;
crease in the lower wages and salaries; and elimination of the metimes too wide spread between the lowest and the highest age and salary categories;
provement of the structure of inter-branch wages;
nplification and shortening of the tariff scales;
crease in the share of tariff wages in actual earnings;
neral introduction of job qualification catalogues (i.e. *Wirthaftzweig-Lohngruppenkatalog* and *Gehaltsgruppenkatalog*);
mination of regionally differentiated rates;
crease in labour productivity by application of piece-rate wages sed on technically justified norms and introduction of approiate premia time wages.

[58] See GBL, Part II, 1 November 1962, p. 77; No. 10, 1963, p. 75; d No. 5, 1965, p. 21.

[59] For further details, see J. Kodarzewski, *Placa wedlug pracy*, Warsaw 1963, p. 277.

[60] According to a direct communication from the Bulgarian Statistical Office.

8.4. THE PATTERN OF WAGE AND SALARY EARNINGS DIFFERENTIALS

An important aim of income policy in the centrally planned economies is to establish economically "correct" relationships in levels of average earnings as between economic sectors and industrial branches, geographical regions, and various skills and occupations. In contrast with the market economies, differentiation of income from employment is largely determined by the centrally regulated wage systems. Notwithstanding the many institutional and administrative means of directing the labour force in the centrally planned economies, the forces of supply and demand for labour do not play a negligible role in wage setting. In a system where workers are free to move, and enterprises are free — within their plan targets — to engage labour, the planning authorities have to set wage and salary rates and to plan average levels of earnings in such a way as to reconcile semi-autonomous movements of labour with their scheme of planning priorities, both horizontally between economic sectors and industrial branches, and vertically between skills and occupations.

Because of the numerous factors, outside the size of planned earnings, which influence labour's propensity to move horizontally or vertically, central regulation of differentials in income from employment has proved to be a complicated task. In the period studied, for instance, the availability of housing or of socio-cultural amenities has strongly influenced the mobility of labour; and — as in all societies, whatever their economic system — the choice of an occupation depends also on individual preferences, its social standing, conditions of work other than those subsumed in basic wage rates, length of vacation offered,[61] etc. The inter-industry and int occupational structure of wage and salary differenti is largely determined by centrally regulated rates; b as was shown above, the wage systems in the plann economies are subject to continuous changes or dist tions, which tend to lessen the impact of controll rates on total earnings.

In what follows, differentials in average earnings a described by broad economic sectors, industrial branch and other cross-sections of the labour force. It has to recalled, however, that average earnings — at whatev stage of aggregation they are intercepted — are the o come of a complex set of factors (such as skill a occupation, age and sex, structure of the labour for and many others). The effect of these factors is diffic to assess and forecast for the planners — and, *a fortio* for the outside observer disposing of incomplete inf mation.

Some figures relating to the basic factors influenci wage differentials in industry as a whole and its maj branches in the Soviet Union in 1962 are reproduced Table 8.15. The varying significance of the skill factor branches and its great impact on average wages in t coal industry is one of the noteworthy features of t

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[61] In 1964, the length of paid holidays in the Soviet Union, f instance, varied from an average of 13.8 working days on st farms to 33.0 days in the teaching profession. Within indust manual workers were granted 18.5 days, engineers-technici 23.0 days, and "other employees" 18.4 days, on average. S *Narodnoe khozyaistvo SSSR v 1964 godu*, pp. 557-558.

TABLE 8.15

Weights of various factors in the formation of average wages in some basic branches of Soviet industry

Percentages of workers' wages in 1962

Industrial branch	Skill	Tariff factors (linked to the national importance of the branch, conditions of work and extent of piece-rate wages)		Regional factors	Rewards for results			Other factors	Weights of tarif and regional factors in the wag component abov the uniform minimum wage
		All factors	*of which:* conditions of work[a]		Total	*of which:* payments for overfulfil-ment of norms	*of which:* premia		
Total industry	18.8	13.0	*2.9*	4.9	15.9	*8.1*	*7.8*	47.4	62.7
of which :									
Coal mining	33.2	14.0	*5.6*	5.7	14.0	*3.4*	*10.6*	33.1	69.5
Non-ferrous metallurgy	19.0	10.1	*1.4*	17.4	12.2	*3.8*	*8.4*	41.3	68.2
Oil refining	19.2	15.4	*4.1*	6.4	13.1	*1.6*	*11.5*	45.9	65.2
Chemicals	18.6	14.1	*5.2*	4.3	13.6	*4.7*	*8.9*	49.4	62.8
Engineering and metal-working	14.8	15.2	*3.0*	3.4	19.4	*12.0*	*7.4*	47.2	60.0
Wood-working	17.4	12.2	*0.8*	4.2	15.4	*10.5*	*4.9*	50.8	64.4
Forestry	18.1	11.2	*5.6*	12.6	12.6	*6.2*	*6.4*	55.5	69.2
Textiles	20.9	11.3	*1.2*	0.3	13.0	*5.5*	*7.5*	54.5	64.6
Clothing	19.7	10.6	*0.4*	0.1	12.1	*7.8*	*4.3*	57.5	67.2

Sources: Batkaev and Markov, *op. cit.*, p. 228.

[a] i.e. those implying higher rates within the branch.

le. Another is the considerable weight (5.6-5.2 per cent) ached to supplements for hardship in the coal, chemls and forestry industries; in other branches, such wood-working and clothing, they are insignificant. e regional supplement weighs heavily in the average ges of workers in the non-ferrous metallurgy (17.4 per nt), but has hardly any effect in the clothing and the tile industries. Rewards accruing from incentive nemes are important in the engineering industry and od-working (in the form of payments for overfulfilment norms) and in the non-ferrous metallurgy and the coal lustry (in the form of premia).

The factors determining the formation of average ges in industry do not remain stable over time. Changes production conditions, skill composition and the terriial location of enterprises lead to corresponding erations in the relative levels of average wages by anches. Moreover, these relatives are influenced by anges in the structure of earnings. Thus, a high share premia and of payments for overfulfilment of norms is ually associated with a fast growth of average earnings. e diminishing weight of the tariff factor in earnings s been a general phenomenon, and Soviet wage perts [62] claim that a tentative projection of the growth average wages indicate that, in 7 to 8 years after the mpletion of the recent wage reform, the share of iff wages in total earnings will have fallen back to pre-reform level. They conclude that in order to avoid ch a development, tariff-rate, and working-norm visions must take place periodically, with due regard the actual rate of increase in earnings. Only in that y, they argue, will it be possible to maintain planned ationships in the level of average wages by branches d by different categories of workers.

The salary fund of managerial and technical staff and her non-manual employees has never been exposed to e influence of so dynamic a factor as payment for overfilment of norms; unplanned increments in premia ly have had some importance but they have usually en restricted. Nevertheless, the salary schedules have be revised regularly in order to preserve planned oportions in relation to workers' wages.

Sectoral and industrial branch differentials of earnings

Information on average earnings by broad economic ctors and industrial branches in four benchmark years of e period under study is presented in Appendix Tables 8.I d 8.II.[63]

Examination of the structure of sectoral earnings leads to the conclusion that the ranking pattern was remarkably stable during the period, while differentials tended to narrow. Drawing a broad distinction between the "productive" spheres of the economy and the service sectors, the former are seen to have enjoyed a privileged position matching the priority attached to them in development policy. Amongst the productive sectors, the earnings' level in construction, industry and transport has invariably been above average and higher than in trade and state agriculture; in the service sector, communal services, public health and education generally rank lowest. The position of a few typical sectors in relation to the average earnings of workers and employees, in the four benchmark years, is illustrated in Chart 8.4. Percentage deviations of sectoral earnings from those in industry are indicated in Table 8.16 below. The earnings advantages in construction in Bulgaria are seen to have been considerable (18-20 per cent above the industrial average), whereas they remained at about 6 per cent in Czechoslovakia; the comparatively low level of earnings in this sector in Hungary in the early 1950s would seem to stem partly from a significant intake of unskilled labour as investment activity expanded rapidly; in Poland the initial advantage has been halved. In all countries earnings in state agriculture were 20-40 per cent below those of industry at the beginning of the 1950s; the gap subsequently narrowed everywhere, but especially in Czechoslovakia, eastern Germany and Hungary in later years, when shortage of labour led to a revision of wage rates, and gradually increasing mechanization probably changed skill requirements. In nearly all countries agricultural earnings have now reached or exceeded the levels in trade and most non-productive sectors.

A full statistical explanation of the structure of earnings' differentials by broad economic sectors in the various countries, which is the result of numerous factors difficult to quantify, is impossible on the basis of currently available data. The advantages of certain "material production" sectors over the service sectors, for instance, derive not only from higher basic rates, incorporating allowances for hard physical labour, but also to a large extent on the composition of the labour force by categories of workers and employees, by skill and sex groups, etc. Changes in the gap between these two spheres of economic activity often result from the fact that the size of the wage-fund in the productive sectors has always been to some extent linked to improvements in labour productivity, whereas no such built-in mechanism for wage and salary increases has existed in the service sectors. If the gap has been prevented from widening, or has narrowed a little, this has usually been the result of policy measures, such as selective revisions of basic wage scales and salary rates, or increases in minimum wages, or improvements in premia conditions.

Soviet experience provides an illustration. Information on sectoral average earnings in the Soviet Union has recently been published for the first time,[64] and only for the period 1958-1964, but the widening of the gap

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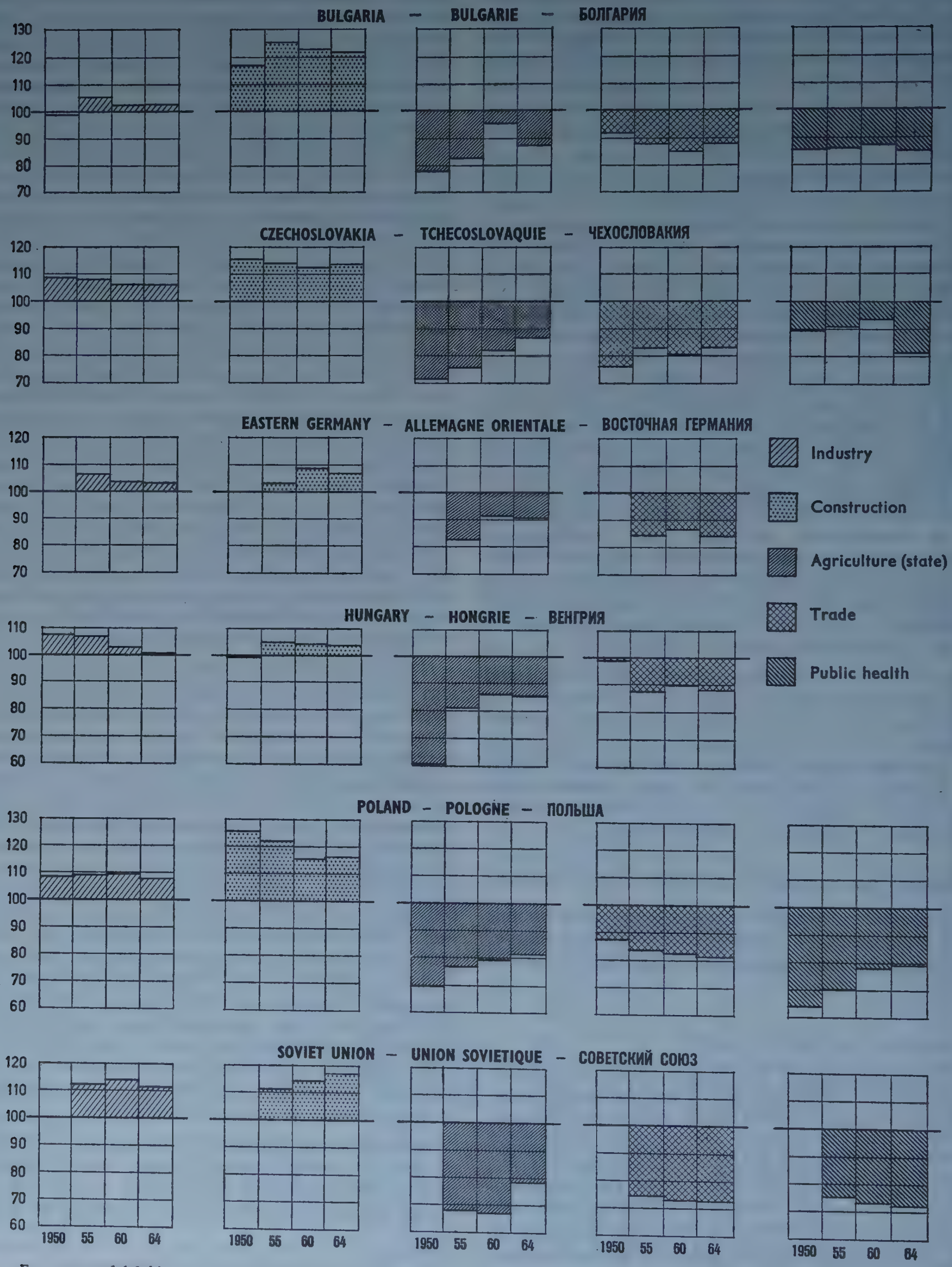
[62] See Batkaev and Markov, *op. cit.*, p. 229.

[63] Sectoral data refer, in general, to the monthly nominal earnings workers and employees in the socialist economy, excluding coerative agriculture; in Hungary only the State economy is included, l in eastern Germany services outside material production are t covered. For broad sectoral groups, minor differences in ssification methods would not seem to invalidate inter-country mparisons. Industrial branch data are available for only five tern European countries and the coverage is less homogeneous n for sectors: they refer to socialist industry in eastern Germany l Poland, and to state industry in Bulgaria and Hungary; moreer in the latter country only workers are included. For traditional l more standardized branch groupings, comparisons between untries would nevertheless seem admissible.

[64] See *Narodnoe khozyaistvo v 1964 godu*, p. 555.

CHART 8.4

Relative earnings in selected economic sectors



NOTE. — For sources and definitions, see Appendix Table 8.I.

TABLE 8.16

Monthly average earnings by sectors in the Soviet Union and five eastern European countries, selected years

Percentage deviations from earnings in industry

Sector	Bulgaria				Czechoslovakia				Eastern Germany		
	1950	1955	1960	1964	1950	1955	1960	1964	1955	1960	1964
roductive sectors											
Construction	+ 18	+ 19	+ 20	+ 19	+ 6	+ 6	+ 6	+ 7	− 3	+ 5	+ 4
Agriculture (state)	− 22	− 22	− 7	− 15	− 34	− 30	− 23	− 18	− 22	− 11	− 13
Transport	+ 17	+ 5	+ 12	+ 9	− 1	− 1	+ 3	+ 7	− 6	+ 1	+ 3
Trade	− 7	− 17	− 17	− 14	− 30	− 23	− 24	− 22	− 20	− 17	− 18
on-productive sectors											
Communal services	− 12	− 17	− 18	− 18	− 24	− 23	− 27	− 30	..	..	..
Public health	− 14	− 18	− 15	− 17	− 18	− 23	− 20	− 23	..	..	..
Education [a]	+ 7	− 15	− 12	− 10	− 18	− 19	− 14	− 17	..	..	..
Banking and insurance	+ 17	− 11	− 16	− 10	..	..	..	..	..	..	..
Administration	+ 1	− 10	− 1	+ 5	..	..	..	..	..	..	..

Sector	Hungary				Poland				Soviet Union		
	1950	1955	1960	1964	1950	1955	1960	1964	1955	1960	1964
roductive sectors											
Construction	− 7	− 2	+ 1	+ 3	+ 16	+ 12	+ 6	+ 8	0	0	+ 5
Agriculture (state)	− 44	− 24	− 16	− 16	− 36	− 30	− 27	− 24	− 39	− 41	− 30
Transport	− 14 [b]	− 9 [b]	− 7 [b]	− 1 [b]	− 10 [b]	− 8 [b]	− 12 [b]	− 6 [b]	− 5	− 5	+ 2
Trade	− 7	− 18	− 12	− 12	− 19	− 23	− 24	− 24	− 33	− 36	− 35
on-productive sectors											
Communal services	− 5	− 9	− 4	− 1	− 21	− 18	− 25	− 13	− 36	− 37	− 36
Public health					− 41	− 36	− 28	− 26	− 32	− 35	− 35
Education [a]					− 20	− 17	− 18	− 15	− 20	− 23	− 22
Banking and insurance					− 10	− 17	− 15	− 13	− 17	− 23	− 21
Administration					− 11	− 13	− 7	+ 3	+ 2	− 6	− 5

Sources: See Appendix Table 8.I.

NOTE. — Co-operative agriculture is everywhere excluded. Data refer to the national economy in Bulgaria and the Soviet Union; the socialist economy in Czechoslovakia, land and eastern Germany (in the latter country excluding non-productive sectors); and to the state sector only in Hungary.

Excluding scientific institutions, except in Poland.

ncluding communications.

etween productive and non-productive sectors is known have slowed down in the years 1947-1954; then, in the rly stages of the wage settlements connected with the age reform, the non-productive sectors were again ft behind; and it was not until the end of the Seven-year an period that considerable upward adjustments of lary scales were decreed for them.[65] In 1965 or 1966, e gap between the two spheres must have narrowed - according to one estimate, from about 20 per cent to ss than 10 per cent.[66]

A breakdown of earnings by industrial branches dicates that some of them enjoyed considerably greater advantages than the sectoral comparison would seem to suggest. From the point of view of ranking, a first broad distinction can be made between "heavy" and "light" industries: fuel, mining and metallurgy appearing invariably at the top of the scale; textiles, clothing and food processing at the bottom. Table 8.17 shows that a pattern of branch differentials had been established already by the beginning of the 1950s; with relatively minor modifications, it has remained stable throughout the period under study. Changes in the position of some major typical branches in relation to industrial averages are illustrated in Chart 8.5.

As with broad economic sectors, the level of branch earnings depends to some extent on basic-wage regulations that reflect the development priority attached to a given branch, but it is also much affected by the structure of employment; the position of the low-paid branches, for example, is in part the result of the high share of unskilled female labour. The available data suggest that

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[65] The adjustments due to be introduced at the end of 1964 and ring 1965 should increase average nominal wages and salaries the average by 25 per cent in education, 23 per cent in health, per cent in trade, 25 per cent in public catering and 15 per cent housing and communal services.

[66] See V. Sukharevsky, *Voprosy ekonomiki*, No. 10, 1964.

TABLE 8.17

Monthly average earnings of workers and employees by selected branches of socialist industry in five eastern European countries

Percentage deviations from earnings in total industry

Branch	Bulgaria[a]				Czechoslovakia[b]			Eastern Germany[c]			Hungary[d]				Poland			
	1950	1955	1960	1964	1950	1955	1959	1955	1960	1964	1950	1955	1960	1964	1950	1955	1960	1964
Fuel or mining	+ 33	+ 23	+ 30	+ 29	+ 25	+ 39	+ 42	+ 17	+ 16	+ 18	+ 11	+ 32	+ 41	+ 45	+ 41	+ 42	+ 47	+ 44
Ferrous metallurgy	+ 35	+ 28	+ 15	+ 19	+ 27	+ 26	+ 23	+ 24	+ 18	+ 18	+ 16	+ 13	+ 6	+ 6	+ 14	+ 26	+ 24	+ 25
Non-ferrous metallurgy	+ 27	+ 35	+ 32	+ 30	+ 20	+ 18	+ 13								+ 16	+ 30	+ 27	+ 24
Energy	+ 10	+ 1	+ 1	+ 6	+ 18	+ 15	+ 16	+ 1	+ 2	—	+ 7	—	—	—	+ 6	+ 1	+ 15	+ 15
Engineering	+ 4	+ 6	+ 7	+ 4	+ 7	+ 4	+ 5	+ 18[e]	+ 12[e]	+ 11[e]								
								+ 9[f]	+ 4[f]	+ 4[f]	+ 10	+ 5	—	+ 2	—	+ 9	+ 5	+ 2
Chemicals	+ 5	+ 5	+ 1	− 2	+ 1	+ 1	− 1	+ 4	+ 4	+ 3	+ 2	− 7	− 7	− 6	− 3	− 3	− 3	− 4
Building materials	+ 10	+ 6	+ 7	+ 5	+ 1	+ 6	+ 7	− 5	+ 2	—	− 13	− 7	− 5	− 5	+ 7	− 4	− 8	− 4
Textiles	− 18	− 16	− 15	− 15	− 32	− 25	− 25	− 24	− 19	− 19	− 14	− 20	− 18	− 18	− 22	− 24	− 16	− 17
Clothing	− 16	− 20	− 19	− 19	− 22	− 30	− 29	− 30	− 20	− 22	− 18	− 17	− 16	− 18		− 27	− 29	− 25
Food	− 17	− 13	− 12	− 10	− 10	− 10	− 9	− 14	− 10	− 12	− 15	− 18	− 13	− 13	− 8	− 15	− 17	− 15

Sources: See Annex Table 8.II.

[a] Annual averages.

[b] Relevant data are not currently published; the index numbers have been reproduced from S. Balek, *Mzdova diferenciace a preference v Ceskoslovenskem prumyslu*, Prague 1962, p. 126.

[c] Calculated on the basis of full-time employed workers and employees.

[d] Workers in the state industry only.

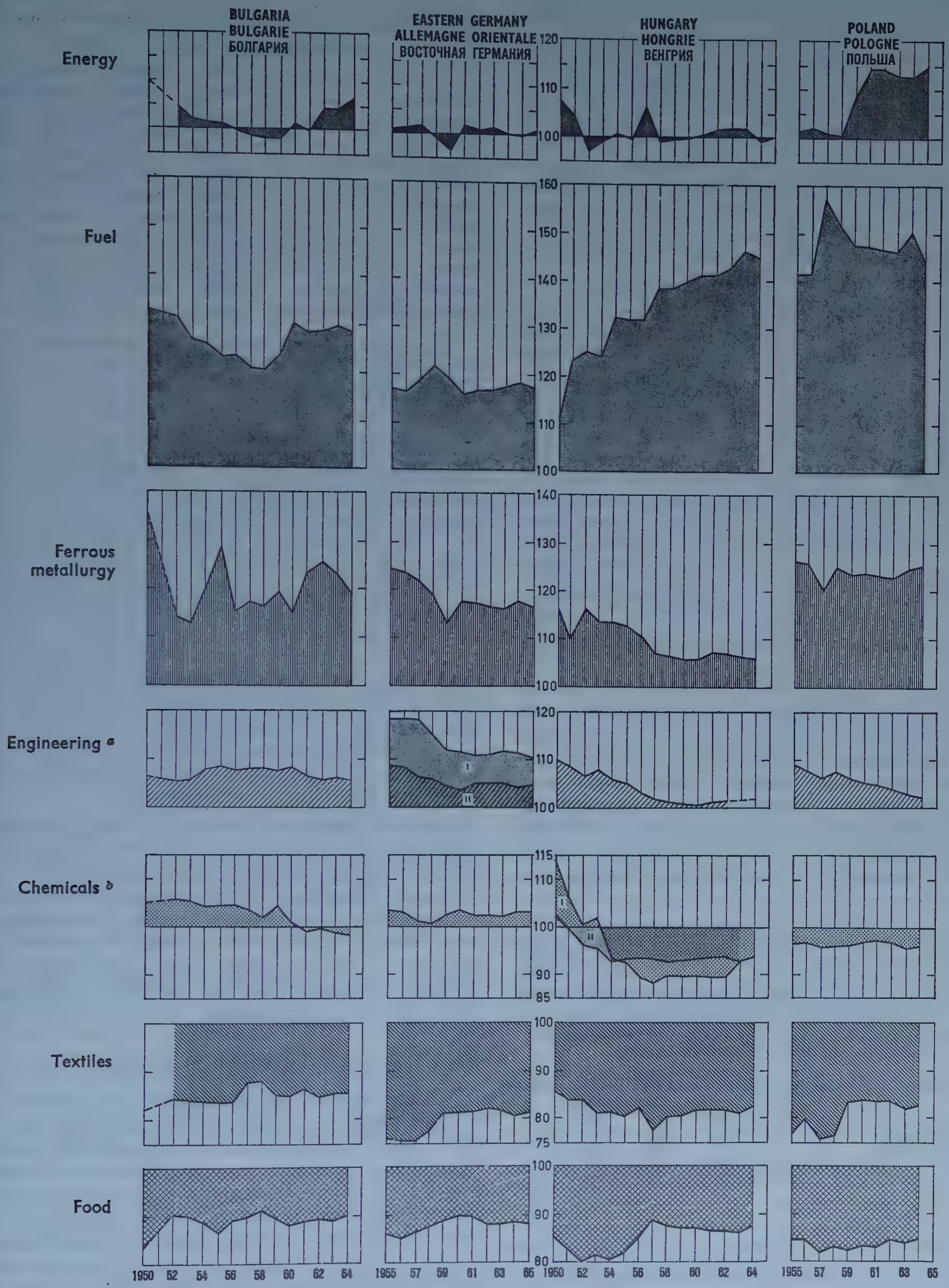
[e] Heavy engineering.

[f] General engineering.

CHART 8.5

Relative earnings in selected industrial branches

Average industrial earnings = 100



OTE. — For sources and definitions, see Appendix Table 8.II.
Eastern Germany: I — Heavy engineering
II — General engineering.

Hungary: I — Rubber and synthetic materials
II — Chemicals.

some narrowing of extreme branch differentials has taken place.[67]

Some statistics on average branch earnings in the Soviet Union for the years 1924-1956, tabulated below, throw some light on the development of the pattern of differentials common to all the eastern European economies during the post-1950 years. The table shows the ranking of 17 industrial branches according to levels of average earnings for selected years of the period, from which changes in planners' priorities emerge clearly.

Ranking of industrial branches by average earnings, 1924-1956

	1924	*1928*	*1935*	*1940*	*1950*	*1956*
Coal mining	10	14	4	1	1	1
Iron ore mining	15	12	6	5	2	2
Ferrous metallurgy	13	9	5	2	3	3
Oil	11	8	1	3	4	4
Paper	7	11	13	14-15	6	5
Engineering	4	1	3	4	5	6
Power plants	..	3	2	7	7	7
Chemicals	5	6	7	6	8	8
Wool processing	12	13	14	14-15	9	9
Leather processing	3	5	10	11	12	10
Wood processing	9	15	11	12	13	11
Cotton processing	14	16	12	10	11	12
Printing	1	2	8	8	10	13
Footwear	2	4	9	9	15	14
Linen	16	17	17	16-17	14	15
Food processing	6	10	16	16-17	16	16
Clothing	8	7	15	13	17	17

Source: A. G. Aganbegian and V. F. Mayer, *Zarabotnaya plata v SSSR*, Moscow 1959, p. 190.

Before, and at the beginning of the plan era, light industries such as printing, leather and footwear, and clothing were at the top of the list, together with engineering, electric power and chemicals. By 1935, the basic and extractive industries had moved up, joining engineering and electric power, and pushing down all branches directly involved in the production of consumers' goods; this pattern became even more marked after the war.

But more relevant than simple ranking is the actu size of differences in earnings levels, which are show in the following table as percentages of the total industri average.

Earnings differentials between industrial branches in the Soviet Uni

Index numbers, all industry = 100.0

	1924	*1930*	*1950*	*1956*
All industry	*100.0*	*100.0*	*100.0*	*100.0*
Coal mining	97.6	92.6	170.1	162.1
Oil industry	94.1	109.1	117.5	111.0
Ferrous metallurgy	87.4	106.9	136.9 [a]	129.3
Engineering	114.5	131.2	105.8	104.1
Chemicals	98.7	119.4	..	101.0
Leather	124.1	106.9	78.4	84.3
Textiles	84.3	76.1	85.5	83.5
Food	105.3	90.5	..	75 [b]
Printing	156.1	122.2	95.8	86.5
Building materials	..	..	88.4	89.5

Sources: Trud i zarabotnaya plata, No. 10, 1961; *Vestnik statistiki*, No. 5, 19 and *Ekonomicheskaya gazeta*, 22 August 1964, p. 23.

[a] Including iron-ore mining.

[b] Aganbegian and Mayer, *op. cit.*, p. 187.

As late as in 1930, earnings in coal mining were sti a few points below the overall industrial level; but sinc then, coal mining has become by far the most dynami branch, reaching in 1950-1956 a position some 60-70 pe cent above the average level, the gap widening sti further after the wage-system reform. Engineering, on th other hand, was in the most favoured position at th beginning of the first Five-year Plan, but lost its leadin place after the war and was in 1956 at a level only 4 pe cent above the overall industrial average; and even thi small margin of advantage probably disappeared afte the wage system reform. At the other end of the scal food-processing and some branches of light industr lost ground after the war, compared with their earlie position; in 1956, earnings in food-processing were abou one-fourth below the industrial average.

In general, between 1924 and 1930 the range betwee the extreme branches narrowed from 1:2.3 to 1:1. After 1935, the gap widened again — particularly betwee 1940 and 1950, when the ratio stood at 1:2.5. Accordin to Soviet wage experts,[68] there was some narrowing in th early 1950s; the 1956 reform should have accentuate this trend, in spite of further gains in coal mining, wher the level of earnings rose by as much as 37 per cer during the 1955-1960 period.

(b) *Occupational differentials in earnings*

The inter-occupational structure of employment incom in eastern European countries is, in principle, laid dow by the regulations governing basic wage scales and salar schedules described in sections 2(*a*) and 2(*b*) abov In practice, though, this pattern may be greatly modifie by the incidence of the fluctuating wage and salar elements, and by accidental factors. Available statistic on occupational earnings, as opposed to rates, are n adequate for an analysis of differentials by typical trade

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[67] It is difficult to find an adequate method for measuring the relative spread of earnings *between* countries, as branch nomenclatures vary in coverage. A calculation of standard deviation coefficients for the same typical branches in the high, middle and low ranges, as selected in Table 8.17, gives the following results:

Dispersion of average earnings between nine selected industrial branches in five eastern European countries in four postwar years

Unit : Coefficient of variation ($100\,\sigma/\bar{x}$), i.e. the spread of average earnings, measured by the standard deviation, as a percentage of average (unweighted) earnings.

	1950	*1955*	*1960*	*1964*
Bulgaria	17.4	15.9	15.2	14.9
Czechoslovakia	17.3	20.2	20.2 [a]	..
Eastern Germany	..	17.7	13.0	13.9
Hungary	12.6	16.1	16.9	18.2
Poland	12.4	22.4	23.2	21.9

Sources: As for Table 8.22.

[a] 1959.

On the basis of the above calculation, there would seem to be a tendency towards a narrowing of the spread in Bulgaria and eastern Germany, and towards a widening in Czechoslovakia, Hungary and Poland. It is clear, however, that interbranch differentials may narrow or remain constant, at the same time as the spread of earnings in component industries may be widening, or vice versa.

[68] See Aganbegian and Mayer, *op. cit.*

d professions. Such conclusions as may be reached e, therefore, based on scattered information and the ndings of limited national sample investigations.

During most of the period under review, policy has general aimed at narrowing the spead in incomes from nployment — which means, in the context of occupa- onal earnings, a reduction in differentials between anual and non-manual workers, professional and non- ofessional groups — while at the same time main- ining "adequate" skill differentials within various tegories.[69]

Although policy measures in the form of minimum age regulations (see Chapter 7) and modifications in e basic wage and salary systems have probably done uch to narrow occupational differentials over the period, is development has also been promoted by improve- ents in the skill level of workers and employees, as a sult of more widely accessible education and technical aining.

Except for very broad categories of workers and nployees, information on the trends and structure of ccupational earnings is not available. Data on average rnings of three statistically conventional groups in the oviet Union and the eastern European countries: anual workers *(rabochie)*, engineering and technical ersonnel *(inzhenerno-tekhnicheskie rabotniki — ITR)* nd administrative and clerical personnel[70] are presented Table 8.18 for four selected years. With some reser- ations (the data most probably refer to jobs rather than combined incomes of individuals), the coverage ppears to be sufficiently homogeneous for comparative urposes. In general, earnings differentials between the ree categories show a tendency to converge, owing ainly to the relative gains in the average levels of wages manual workers. In 1964, the discrepancy between the verage earnings of engineering and technical staff and ose of manual workers was still considerable in Poland about 65 per cent, but very small in Czechoslovakia 30 per cent; in the other countries for which data are vailable, the gap amounted to about 40-50 per cent. verywhere, except in Poland,[71] the level of administra- ve and clerical employees' earnings was below that of anual workers, their relative position having deterior- ted since the beginning of the 1950s.

Extension of the Soviet series back to 1932 shows that in the early 1930s the earnings level of administrative and clerical employees was about 1.5 times above that of manual workers; the relation has been reversed since around 1950, however, and by the late 1950s this category was earning, on average, about 20 per cent less than manual workers. In more recent years the countervailing trend has again set in, no doubt strengthened further by the salary increases decreed for the service sectors in 1964-1965. The change in the earnings ratio between engineering and technical staff, on the one hand, and manual workers, on the other, has been equally sweeping. The advantage of the former category (2.5 times better off than the latter in the beginning of the 1930s) has steadily dwindled to reach only about 40 per cent in 1962. The relationship between the average earnings of the two non-manual sub-groups remained about stationary over the period covered, engineering and technical staff having an employment income level about twice that of administrative and clerical employees.

In interpreting these trends, it should be remembered that non-manual workers have, as a rule, more opportunities for cumulating jobs than manual workers; on the other hand, the incidence of secondary employment in the family might be greater among the latter. Moreover, the relative advantages gained by manual workers have largely been the product of the changes in the composition of their group, reflecting a considerable improvement in average skills.

Notwithstanding the imperfections of the data presented in Table 8.18, they seem to indicate that the policy aiming at a narrowing of differentials between manual and non-manual labour earnings has met with success. It even appears that in some countries this policy was pushed too far, with the result that corrective measures in the opposite direction have had to be taken in order to maintain incentives to higher skill.[72]

As far as occupational earnings differentials of manual workers are concerned, rewards for skill are in principle reflected in differences in the basic wage rates paid for the job, as defined in the job-qualification manuals; and, as already mentioned, one of the objectives of the wage reforms in the various countries was to re-establish a more meaningful relationship between skills and remuneration, which had become blurred. The earnings of typical trades in a given industrial branch are obviously influenced by its priority as expressed in the rates of the first labour grades of the relevant wage scales, but even "competitive" trades would seem to profit thereby.[73]

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[69] For analytical purposes the identification of such broad cate- ories presents many difficulties, there being always some confusion the borderline. Moreover, the interpretation of "adequate" fferentials varies in space and in time.

[70] The definition of manual workers is rather straightforward, but is more difficult to establish a clear demarcation line between the TR" and the "administrative and clerical personnel". In the amework of industry, to which the data refer, all personnel having functional influence on the technical management and supervision the production process, e.g. directors of enterprises, engineers, chnicians, economists working in departments for planning of oduction, labour, establishment of technical norms and also the remen (even if they have no formal technical training) belong to e ITR category. Administrative and clerical personnel include l administrative staff in departments dealing with finances, account- g and purely clerical work. Confusion at the enterprise level is oided by help of a classification list for reporting. See N. H. Ere- ina *et al.*, *Statistika Truda*, Moscow 1965, p. 46.

[71] It is not possible to ascertain whether differences in classification ay be part of the explanation.

[72] See, for instance, Aganbegian and Mayer, *op. cit.*, pp. 202 and 255. A detailed inquiry on earnings of managerial and technical staff in Hungary in 1957 pointed out that the differential in favour of low-ranking professionals as opposed to manual workers was extremely small and in many instances negative. See *A mérnökök és technikusok helyzete*, Budapest 1959. The problem has been referred to frequently in Czechoslovakia.

[73] Two sample surveys of earnings in "competitive" trades, one referring to the situation in major industrial branches in Poland in 1958 (see S. Weglowski, *Finanse*, No. 6, 1960) and the other to that in Hungary in 1961 (see *A munkások szakképzetsége és kereseti arányai*, pp. 96-103) would seem to reveal a substantial difference between the earnings of similar trades in heavy industries on the one hand and light industries on the other.

TABLE 8.18

Monthly earnings of industrial workers and employees by type of occupation

Country and category		1950		1955	1960	1964		1950		1955	1960	1964
	In national currency						*Index (workers' earnings = 100)*					
Bulgaria												
(socialist industry)												
Manual workers	472[a]	..	686[b]	806	972	1 102	100[a]	..	100[b]	100.0	100.0	100.0
Engineering and technical personnel	818	..	929	1 235	1 381	1 574	173.3	..	135.4	153.2	142.1	142.8
Administrative and clerical personnel	550	..	662	767	912	1 086	116.5	..	96.5	95.2	93.8	98.5
Hungary												
(state industry)												
Manual workers		586[c]		1 149	1 574	1 708		100.0[c]		100.0	100.0	100.0
Engineering and technical personnel		1 166		1 979	2 458	2 618		199.0		172.2	156.2	153.3
Administrative and clerical personnel		824		1 192	1 487	1 615		140.6		103.7	94.5	94.6
Czechoslovakia												
(total industry)												
Manual workers		887		1 272	1 406	1 506		..		100.0	100.0	100.0
Engineering and technical personnel		..		1 605	1 866	1 962		..		126.2	132.7	130.3
Administrative and clerical personnel		..		1 082	1 226	1 270		..		85.1	87.2	84.3
Poland												
(socialist industry)												
Manual workers		567		1 155	1 778	2 026		100.0		100.0	100.0	100.0
Engineering and technical personnel		1 027		1 806	2 832	3 341		181.1		156.4	159.3	164.9
Administrative and clerical personnel		684		1 138	1 837	2 136		120.6		98.5	103.3	105.4
Soviet Union[d]												
(total industry)												
Manual workers		..		..	..	..		100		100	100[e]	100[f]
Engineering and technical personnel		..		..	..	..		175		165	151	144
Administrative and clerical personnel		..		..	..	..		93		88	80	84

Sources: National statistics; A. G. Aganbegian and V. F. Mayer, *Zarabotnaya plata v SSR*, Moscow 1959; and I. A. Orlovsky, *Planirovanie zarabotnoi platy v promyshlennosti*, Moscow 1964.

NOTE. — The various years indicated by the footnotes relate to all the figures in the column in which they appear.

[a] 1948. [b] 1952. [c] 1949. [d] Corresponding data for an earlier period would be: *1932:* 100, 262, 150; *1935:* 100, 236, 126; *1940:* 100. 210, 109. [e] 1959. [f] 1962.

The structure of salary rates for non-manual workers eems to be characterized by relatively small differences between occupations outside the managerial class, but by a distinct interval between the latter and all other ategories — the size of the gap being a function of the cale and national importance of the enterprise. In the ange from subordinate technical employees to clerical taff, there sometimes appears to be a close correspondence o wage rates and earnings of manual workers by labour rades, although it may vary by branches.[74]

On the whole, earnings in the service sector are lower han in the productive sector, but occupational differentials seem to be larger in the former than in the atter. Very high incomes are known to be earned, for nstance, by those at the top of artistic, scientific and cultural professions, whereas medicine and teaching have agged.[75]

Conditions differ, however, from country to country, nd in the absence of further statistical information, the tudy of occupational earnings can hardly be pushed beyond generalities.

c) *Differentials in earnings by sex*

In all the economies of the region it is a principle of policy that women should get equal pay for equal work. However, differentials are in fact considerable, although vailable statistical data do not permit a systematic nalysis of their magnitude. For some countries (see below), recently published information indicates that women's average earnings in the socialist sector are about one-third below those of men.

The explanation of the differential largely consists in he different structure of male and female employment by economic sectors, industrial branches, and occupations. n accordance with the pattern of development priorities hat prevailed in the period under review, the basic tariff ystems generally favour manual, as opposed to non-manual, work; productive as against non-productive ectors; and heavy as against light industry. In all counries female employment is very heavily concentrated in he low-rate groups, as can be seen from Table 8.19.

The structure of female employment is naturally determined in large measure by physiological aptitudes, women being comparatively rare in branches where strenuous physical effort or unhealthy work conditions prevail; the heavy reliance on piece-working with high rewards for quantitative output may also be a contributory factor. From the point of view of skills and training, the rapidly increasing female labour force is probably still at a lower level of qualifications than the male population in most countries; the branch specialization of employed women who have university and secondary school training is also strongly biased towards economic sectors where rewards are relatively low.[76] There are, further, such questions as working experience, age structure, actual working hours, and the impact of supply and demand on the labour market,[77] and persisting traditional attitudes towards female labour, all of which affect the manner in which it is allocated to the grades of wage scales and salary schedules.

A Polish investigation [78] into the structure of earnings by sex shows that in the 1957-1962 period women's average wages in the socialist sector were some 37-40 per cent lower than those of men in the category of manual workers; the corresponding figure for non-manual workers was 34-36 per cent. A comparison of average earnings of men and women with university or secondary school training in 1958 in various economic sectors leads to similar results: in the former group the differential ranged from 17 to 36 per cent and in the latter from 20 to 31 per cent. A further breakdown of the 1958 data by 14 major occupations within the group of managerial and technical staff shows the differences between male and female earnings ranging from 10 to 32 per cent, and from 9 to 37 per cent in the two educational groups mentioned earlier. After considering other criteria, such as age and length of employment, the investigation arrives at the conclusion that the actual ratios between male and female earnings cannot be explained by economic factors alone.

A Hungarian study [79] of similar kind indicates that average earnings of female workers and employees in the state economy were almost 35 per cent lower than

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[74] The data below referring to the situation in the Soviet engineerng industry in 1960 illustrate this point:

Salaries in some non-manual occupations in engineering

	Average basic salary range (roubles)	*Piece-workers' equivalents*		*Average earnings (roubles)*	*Piece-workers' equivalents*	
		Grade	*Basic rate (roubles)*		*Grade*	*Average earnings (roubles)*
Clerk	57	I	56	68	I	70
Cashier	67	II	63	78	II	79
Bookkeeper . . .	77	III	72	91	III	90
Accountant . . .	92	V	96	110	IV	103
Technician . . .	75	III	72	88	III	90
Engineer-economist . .	102	V-VI	96-112	121	V	120
Foreman	108	VI	112	127	V	120

Source: G. I. Kapustin, *Zarabotnaya plata v promyshlennosti SSSR i yeyo soverhenstvovanie.* Moscow 1961.

[75] In the Soviet Union top salaries in administration, research nstitutes and higher educational institutions were cut in 1957; alary rates in public health and education were significantly increased n 1964-1965.

[76] In the Soviet Union the proportion of women in the total of actively employed persons with university and secondary specialist training in 1964 was as follows:

With university training	*Percentages*
Total	53
of which :	
Engineers	31
Agricultural engineers and veterinaries	41
Economists, statisticians and commodity experts .	63
Doctors (excluding dentists)	74
Teachers, librarians and cultural officers	68
With secondary school training	*Percentages*
Total	63
of which :	
Technicians	38
Agricultural technicians	44
Statisticians, etc.	76
Medical staff (including dentists)	92
Teachers, etc.	83

Source: Narodnoe khozyaistvo v 1964 godu, p. 566.

[77] In many instances the local industrial structure may offer more or less favourable opportunities for female employment, especially for married women.

[78] See *Zeszyty Naukowe*, No. 57, Warsaw 1965, pp. 53-82.

[79] See *A nők helyzete a munkahelyen és otthon*, Budapest 1962 p. 13.

TABLE 8.19

Proportion of women in total employment, by major economic sectors and branches, 1964

Percentages

	Bulgaria	Czecho-slovakia	Eastern Germany	Hungary [a]	Poland	Rumania	Soviet Union
All sectors	39	45	47	38	36	29	49
Industry	38	40	40	39	31	27	46
Construction	11	14	10	14	12	8	29
Agriculture (state)	49	52	46	39	..	22	43
Transport	12	19	25	20	17	7	25
Communications	46	57	65			43	65
Trade	46	71	67	59	61	42	74
Public health	69	77	..	..	77	65	..
Education	62	60	..	..	64	58	44
All industrial branches	40	..	40	37 [b]	31	..	46 [c]
Electricity	9	..	24	21	17	..	29
Fuel	15	..	..	10	11	..	..
Metallurgy ferrous	17	..	21	20	16	..	29
Metallurgy non-ferrous	13	..				..	..
Engineering	22	..	22	33	21	..	32
Chemicals	39	..	40	38	34	..	..
Building materials	22	..	22	35	18	..	36
Cellulose and paper	48	..	51	44	29	..	44
Glass and ceramics	34	..	45	..	43	..	..
Textiles	77	..	70	68	63	..	53
Clothing	80	..	88	78	74	..	82
Leather	47	..	66	58	45	..	63
Printing	59	..	46	52	49	..	..
Food processing	56	..	51	45	33	..	54

Sources: National statistics; *Zhenshchini i deti v SSSR*, Moscow 1963, p. 107.

[a] 1965. [b] State industry only. [c] 1961.

NOTE. — The non-state sector of agriculture is excluded.

those of males, as data in the following summary table show:

Monthly average earnings by sex in Hungary in 1959

	Males	*Females*	*Female earnings as percentage of those of males*
	(in forints)		
Managers, engineers-technicians	2 516	1 884	74.9
Other employees	2 046	1 322	64.6
All employees	*2 249*	*1 398*	*62.2*
Skilled workers	1 923	1 314	68.3
Semi-skilled workers	1 558	1 175	75.4
Unskilled workers	1 342	885	65.9
All workers	*1 691*	*1 088*	*64.3*
All workers and employees	*1 836*	*1 209*	*65.8*

Source: As ipari munkások munkakörülményei és bérhelyzete, Budapest 1966. Vol. 82, p. 73.

In Czechoslovakia average female earnings in the socialist sector of the economy are reported to have been about one-third lower than those of male workers in 1964.[80] As in the other countries considered, there would seem to be a fairly high correlation between the rankin of economic sectors and industrial branches, accordin to level of average earnings, and their share of femal employment.

The ratio of female to male earnings is least favourabl in the health and social welfare sector, where the shar of female employment is highest. In general, thoug the spread in female earnings among sectors appears t be smaller than that in male earnings.[81]

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[80] See *Statistika*, No. 11, 1965, p. 503.

[81] If particular occupational earnings are considered, instead sectoral averages, the situation would seem to be the reverse, the following data show:

Spread in male and female earnings by selected occupations

Index

	Male textile workers' earnings = 100	*Female textil workers' earnings = 10*
Worker at an assembly unit in an engineering plant	119.7	114.2
Teacher	114.8	160.4
Bank employee	146.3	183.9
Doctor	148.7	211.8
Research worker	158.1	182.7

Source: Hospodarske Noviny, No.1965, 5, pp. 8-9.

Male and female earnings by branches of the socialist sector in Czechoslovakia in May 1963

Sector	Average monthly earnings in Kčs[a]	Index of female earnings		Percentage females in total employment
	Total	Total average earnings = 100	Male earnings = 100	
ilding	1 712	67.8	65.0	12.0
ail transport . .	1 676	72.3	68.5	18.2
oad transport . .	1 676	71.5	68.2	14.4
dustry	1 619	73.6	62.6	36.4
dministration . .	1 570	77.6	65.2	45.7
lucation, culture	1 417	87.2	70.3	65.4
orestry	1 411	75.2	67.0	33.0
ommunications .	1 395	84.5	74.2	47.2
ate farms	1 307	85.2	77.3	40.9
ealth, social welfare	1 304	86.1	61.6	74.2
etail trade . . .	1 268	90.7	73.5	71.5
ommunal service .	1 262	82.6	71.2	47.6
ublic catering . .	1 192	90.3	74.9	67.8

Source: Statistika, No. 11, 1965, p. 504.

[a] Total earnings in May 1963 of workers and employees who have worked at least 0 hours.

Data on differentials between average male and female arnings in eastern Germany are not available; but in dustry they must be considerable, judging by infor-ation on the skill classification of female labour; for 1964 the average skill grade of male workers was 5.11 ast German wage scales have generally 8 labour grades) nd only 3.54 for women.[82]

) *Regional differentials*

Planned regional differentials in wages and salaries are gnificantly large only in the Soviet Union. In the astern European countries basic rates are not, in prin-ple, differentiated according to regional conditions of ork. But — as with male and female wages and salaries - the absence of explicit regulations does not prevent *e facto* differences in average earnings by regions result-g from differences in structure of employment. In all ountries, average earnings of workers and employees re, as a rule, higher in main towns than in provincial owns, and higher in the latter than in villages. Control f the level of regional earnings is, in a way, more a atter of regional development policy than of wage olicy; in the context of incomes policy, changes in egional earnings are most relevant in planning combined amily incomes, which are greatly influenced by the higher ctivity rates in large cities and industrial centres.

The statistics available on nominal regional earnings eastern European countries are of limited analytical terest. Those relating to the situation in Poland at the eginning of the 1960s show average earnings of workers and employers in Katowice and the City of Warsaw to have been, respectively, 19 and 11 per cent above the national average, whereas those in less industrialized provinces were as much as 15 per cent lower.[83] Information for the two main regions in Czechoslovakia indicates that differentials were narrowing in the 1950-1964 period, owing to the faster rise of earnings in Slovak territories.[84] In eastern Germany regional differentiation of wage and salary rates was almost entirely discarded in 1958. In Hungary, it appears that a solution to the problem of labour concentration in Budapest — to some extent attracted by the higher level of earnings — is being sought by a differentiated pay-roll tax paid by enterprises, rather than by wage regulation.

It is in the vast territories of the Soviet Union, with its many regions differing in respect of climate, density of population, degree of industrialization, development of infra-structure, etc., that regional differentiation of wages and salaries is outstandingly important. Throughout the plan era a policy of regional development has been pursued, aimed at an absolute and relative improvement in the conditions of the economically backward areas; this aim gained greatly in importance, particularly as regards the eastern regions, for strategic reasons during the last war and, after the war, because of the desire to utilize more fully their rich natural resources.

Given the high degree of labour mobility in the Soviet Union, and the generally inadequate supply of local labour in the economically less developed areas, rapid development in these regions would seem to require not only a levelling of real incomes in the various parts of the country, but even preferential treatment for the less developed areas, so as to ensure an adequate inflow of labour from elsewhere.[85] The experience of the last decade or so has shown, however, that determination of the "correct" differentiation of wages and incomes is a problem that has not been satisfactorily solved — for reasons that are not difficult to see. It is not possible, for social and political reasons, to offer the attraction of high remuneration to marginal, "imported", labour without

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[82] In the same year, the proportion of women in the total number f production workers in the various skill grades were as follows *ercentages)*:

I	II	III	IV	V	VI	VII	VIII
84.2	90.4	74.7	39.2	14.8	6.4	5.0	4.5

ee *Wirtschaftswissenschaft*, No. 4, 1965, p. 592.

[83] See, *Praca i zabezpieczenie*, No. 3, 1963; and *Ekonomista*, No. 2, 1963.

[84] **Regional structure of average industrial earnings in Czechoslovakia**

(National average = 100)

	1950	*1955*	*1960*	*1964*
Czechoslovakia	100.0	100.0	100.0	100.0
Czech regions	102.6	101.3	100.8	100.8
Slovak regions	89.7	95.4	97.2	97.6
Trends 1948 = 100				
Czechoslovakia	115.9	146.6	166.7	176.8
Czech regions	116.7	145.8	165.0	174.9
Slovak regions	113.2	152.4	176.4	187.8

Source: National statistics.

[85] The problem of regional differentials has been widely discussed in the Soviet Union. Some experts consider that the larger supply of labour now allows regional differentiation of wages to be dispensed with. This view has been strongly challenged recently on the grounds that, between 1956 and 1960, the population of Siberia expanded less than warranted by the rate of natural increase, indicating thus a net outflow (see *Voprosy ekonomiki*, No. 6, 1965, pp. 3-11). Other experts agree that in the long run regional differentials will disappear, but maintain that at present they should be widened (see *Voprosy proizvoditelnosti truda i oplaty truda*, Leningrad 1964, pp. 117-131).

at the same time raising the incomes of local manpower to the same levels. But the cost of such a policy is often prohibitive and, therefore, recourse has been had to some uneasy compromises, such as offering high wages in the new and high priority branches of industry, whilst maintaining those in the traditional branches (food processing and light industry) at, or even below, the all-Union levels.[86]

Technically, the establishment of wage differentials, in real terms, between the various regions of the Soviet Union presents the same methodological and conceptual difficulties which are encountered in inter-country comparisons. Thus, the structure of consumption varies greatly between areas, owing partly to the different habits of the various ethnic groups in the Soviet population and still more to the extremes of climatic conditions. There are wide differences in general price levels and in price relatives. Although the prices of industrial goods vary, on the whole, relatively little between regions, this is not true of foodstuffs. Among the latter there are price differentials for products the price of which is centrally determined (bread, sugar, meat, butter), and even more so for those which are priced locally (fruit, milk). Average price levels for foodstuffs are also affected by the share of transactions on peasant markets, where prices are higher than in the state retail network and show a very wide variation between regions.

An idea of the order of magnitude of price differences is provided by the data in the text table below. The zonal *(poyas)* price ranges show deviations not exceeding 20 per cent for all food items, and smaller for all goods sold in the state retail outlets. The spread is considerably wider — even in state retail prices — when differences in th structure of consumption are taken into account (se the last column). For reasons already mentioned, th gap is wider still for cost-of-living comparisons.[87]

Regional price differentials in Soviet state retail trade

Index numbers

Region	*Standardized consumption structure*					*Differentiated consumption structure* [a]
	Food				*All goods*	
	All	*White bread*	*Veal*	*Sugar*		*All goods*
Southern regions of the European part of USSR (incl. Ukraine)	100	100	100	100	100	100
Central areas of European part of USSR (incl. Ural) . . .	108-109	106	109	113	105	110-115
Southern areas of Siberia and Far East, northern areas of the European part of USSR	116-118	110	116	124	112	120-130
Extreme North . . .					112	135-150

Source: Aganbegian and Mayer, *op. cit.*, pp. 192-193.

[a] On the basis of actual needs of the given region.

As part of the revision of the Soviet wage system, ne regional wage coefficients were introduced for the pu pose of providing a correction factor for cost-of-livin differences:

Basic regional wage correction coefficients

Ukraine, Moldavia, Caucasus, Povolshe, Baltic republics, central and southern regions of RSFSR	1.0
Ural, Southern West Siberia, Kazakhstan	1.1-1.2
Far East, South-East Siberia, some parts of European North	1.2-1.3
Asia Minor	1.15-1.3
Localities similar to the Extreme North :	
eastern regions	1.4-1.5
other regions	1.3-1.4
Extreme North :	
Asiatic territories	1.6-2.0
eastern part of European territories	1.5-1.8
Murmansk region	1.4-1.5

Sources: Batkaev and Markov, *Differentsiatsia zarabotnoi platy v promyshlennos SSSR*, Moscow 1964, p. 184.

[a] In the relevant regions, there are some enterprises and industrial branches to whic regional coefficients do not apply.

These coefficients often vary also according to th importance of the sector or industrial branch, but th system is far from uniform and has often been criticized It is asserted that the adjustments do not make up fo relative deficiencies in some regions in the provision o social services, as well as of housing and socio-cultura amenities; and many distant areas still suffer from poo supplies of consumers' goods. For these reasons, th existing system — even when buttressed, in some cases by special hardship allowances — has not prevented high rate of turn-over of imported labour in man development areas.[88] In the future, the problem woul therefore seem likely to consist less in improving th system of regional coefficients than in creating attractiv living conditions and a policy of diversifying industria location, so as to offer equal employment opportunitie for men and women and resultant benefits for the com bined family income.[89]

8.5. DISPERSION OF INCOME FROM EMPLOYMENT

The preceding sections of this chapter have indicated a number of influences potentially responsible for the variation in the distribution of income recipients according to the size of their wage or salary. In other words this distribution could be expected to mirror the com bined effect of the differentials in skills, occupations

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[86] See Mayer, *op. cit.*

[87] The Labour Research Institute has made some estimates base on the consumption basket of lower income groups and arrived a the following deviations from the cost of the Ukrainian basket

Ukrainian SSR	100
Northern regions of European Centre	108
Ural regions	112
Southern regions of East Siberia and Far East	116
North Eastern regions outside Extreme North	145
Extreme North	172

Sources: Mayer, *op. cit.*, p. 263.

[88] See Mayer, *op. cit.*, pp. 258-265.

[89] See Batkaev and Markov, *op. cit.*, pp. 193-194.

sectors, branches and regions that were described above.

The purpose of this section is to disentangle the various influences that have moulded the shapes of the employment incomes curves. Interest centres less on the measure of location of distribution (i.e. averages, medians, etc. which were largely discussed in terms of trends and differentials in Chapter 7 and in section 8.4 above), than on measures of dispersion and skewness, in so far as they reflect the degree of equality or inequality of employment income distribution of the universes and sub-universes under study.[90]

Before the available statistics are considered, the main determinants of employment income dispersion are summarized and the main direction of their impact during the period is indicated.

The variance of the distribution of earnings of all wage- and salary-earners can be reduced to four basic factors. Firstly, it is the outcome of the wage system regulations themselves, inasmuch as they establish the number and spread of skill grades, either in wage tariffs or in salary scales, and thus determine the limits within which basic wages of individual workers can vary. It has been shown that the general tendency prevailing in the Soviet Union and in eastern European countries in the later years of the period under review was to reduce both the number of skill grades and the spread of basic wage rates between the lowest and the highest grades.[91] In this respect, therefore, the wage reforms of the late 1950s contributed to some narrowing of the spread in basic wages.

Secondly, the shape and the moments of the frequency distribution of basic wages by wage-size are a function of the actual allocation of workers and employees to the statutorily established grades. Assuming unchanged job descriptions and job-allocation criteria,[92] the changes in the distribution are very closely linked to the changing pattern of skills in the given universe. By and large, the tendency has been for average skills to increase within both manual and non-manual occupations. Given positive skewness of income distribution (see below), this factor by itself would have entailed more symmetry and some narrowing of the spread. Nevertheless, the early phases of the industrial take-off might have provided an exception to this rule, particularly in countries where accelerated development drew heavily on an intake of unskilled peasant and female labour. Later, the vast programmes of educational and vocational training that accompanied technological progress everywhere must have tended to push up the shares of highly skilled and skilled workers at the expense of unskilled labourers.

Thirdly, when distribution of total earnings is considered, rather than that of basic wages, the incidence and progressiveness of the premia and bonuses which make up the difference between wages and earnings are of paramount importance. In principle, the special rewards (premia and bonuses) in both the manual and non-manual categories tend to rise more than proportionately with an increase in skills, and the variance of earnings distribution would therefore be expected to exceed that of basic wages.[93] However, the policies generally followed in the early phases of industrialization of superimposing on the existing wage system incentives aimed at maximum encouragement of physical labour input led to serious distortions of rewards by skill and therefore to a narrowing of earnings differentials. It therefore seems likely that the wage reforms tended to re-establish the original situation. Nevertheless, the overall impact of the reforms was by no means unequivocal. The reduction of the incidence of piece-rate work, and the abolition of progressive premia (combined with "loose" work norms), also influenced the upper ranges of the earnings distribution by eliminating the extreme values of the variable.

Finally, the dispersion of wages and earnings was affected in most countries by the introduction, and subsequent upward revisions, of statutory and nation-wide earnings minima. The distributive policies aiming at some reduction in the dispersion of incomes, which were pursued in several countries of the area after the mid-1950s, were largely incorporated in the planned regulation of these minima. But the policy significance of these measures should not be exaggerated. As already mentioned, the increases in wage minima often amounted to no more than legitimization of the existing situation. Moreover, as the revisions occurred at rather wide intervals, they often represented only a delayed action in catching up with the continuously rising average earnings, rather than a genuine shortening of the range between the minimum and the average wage.

These observations show that the various factors affecting the shape of frequency curves in the centrally planned economies have been neither uniform nor one-sided in their impact. More often than not, the net outcome was the result of conflicting and sometimes unpredictable forces. This conclusion is scarcely startling when it is recalled that the frequency distribution of earnings of all wage-earners is in fact a heterogeneous agglomeration of several more homogeneous universes — males and females, manual and non-manual workers in particular sectors or branches, etc. — which differ among themselves, in some cases greatly, with respect to their central values and dispersion (see below).

In these circumstances, it would be wrong to interpret the rather insignificant fluctuations in the shape of frequency distributions of earnings over time as the result of a premeditated policy for attaining well-defined income-distribution objectives. No exact standards have ever been established anywhere, beyond the rather general and negative principle that too little spread — "*uravnilovka*", or levelling up of incomes from work — is a bad thing. True, the wage reforms of the late 1950s did result, subject to the reservations made, in some narrowing of the inequalities. But a correction of some distortions of the wage system is not the same thing as a conscious policy of radically transforming existing differentials. There are grounds for believing, for instance, that the campaigns — often supported by Trade Unions and Workers' Councils — leading to some increases in statutory wage minima were intended not so much to narrow incomes inequalities as to prepare the ground for general wage increases.

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[90] The concentration of household total and per capita incomes is discussed in section 9.3 of Chapter 9.

[91] See section 8.3 above.

[92] A tendency has been noted before (see section 8.2) for enterprises to "over-grade" their employees, i.e. to assign them to a higher grade category than justified by their qualifications.

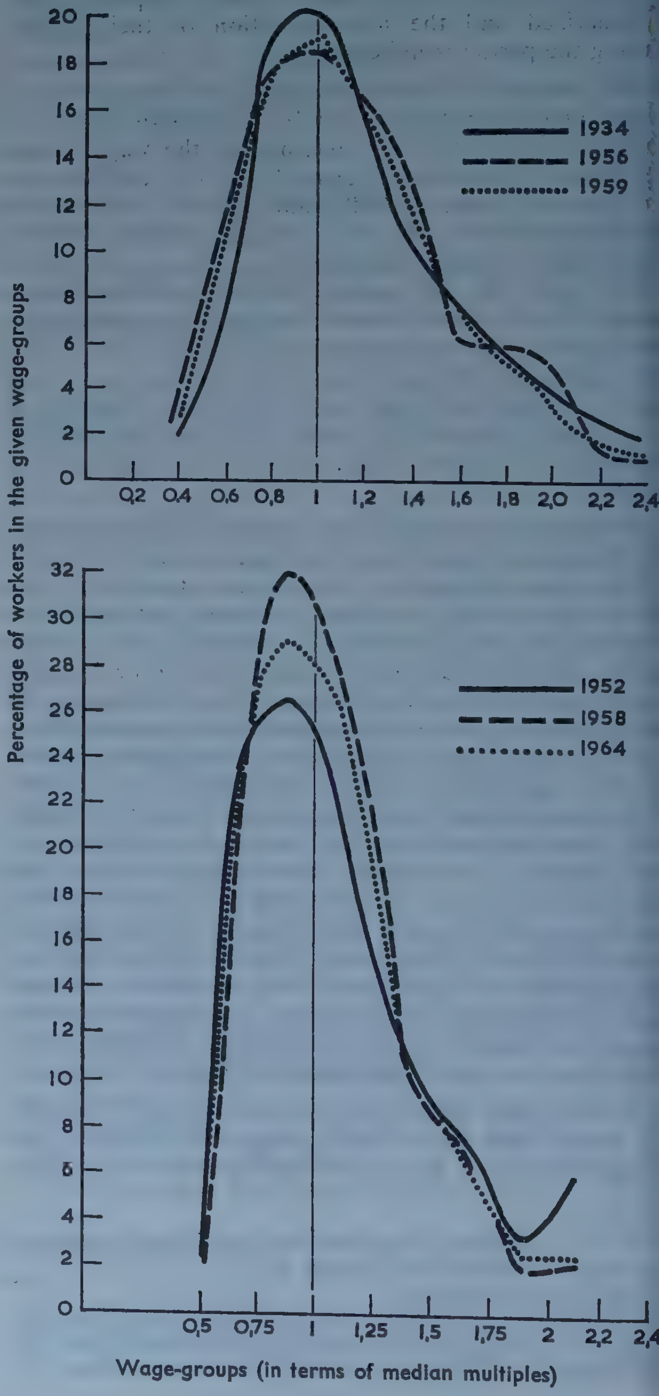
[93] Some premia are set in proportion to the basic wage. However, the supervisory and management personnel tend to participate more than proportionately in the distribution of awards linked to the successful performance of the enterprise as a whole, whereas within the piece-workers category work norms are usually easier to overfulfil among the higher than among the lower skills.

Turning to statistical trends and patterns, it has to be stressed at the outset that the statistics available on the distribution of recipients of employment income according to size of earnings are still very incomplete, in terms of historical coverage as well as of the range of wage and salary earners' categories covered and of the refinement of income class-intervals. Poland has published since the mid-1950s[94] a comprehensive series of frequency distributions by income size, separately for manual and non-manual workers and for males and females in the main sectors of the economy and main industrial branches. Some series, largely restricted to all wage- and salary-earners, are also available for some years for Czechoslovakia and Hungary, in sufficient detail to allow computation of the main measurements characterizing the shape of these distributions. Elsewhere, only fragmentary data have been published from time to time, usually broken down into only a few and uneven class intervals which do not permit any firm conclusions regarding the extent of income dispersion or concentration to be drawn.

The ratio of the upper to the lower quartile $\frac{Q_3}{Q_1}$ and/or the inter-quartile range expressed in terms of the median $\frac{Q_3 - Q_1}{Me}$ have been recommended,[95] and are commonly used in the centrally planned economies, for measuring income dispersions.[96] These indicators, together with measurement of skewness (also quartile-based) have been calculated for some distributions of wage- and salary-earners in five countries at various points of time (see Table 8.20). Notwithstanding the short periods covered, comparison of these curve characteristics brings out some interesting features. Thus, it appears that the dispersions of wage- and salary-earners are (and have been for some time) markedly wider in the Soviet Union[97] and in Poland than in Czechoslovakia and Bulgaria and, to a lesser extent, in Hungary. The order is different however, with regard to the skewness of the distributions By far the most symmetrical curves appear to be those fo Czechoslovakia, followed — in the later years — b Poland and the Soviet Union.

CHART 8.6

Frequency distributions of employment income in th Soviet Union (manual workers) and Hungary (all wage earners) according to wage-groups expressed in term of respective medians



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[94] However, the series broken down by sex ceased to appear in the statistical yearbooks after 1962.

[95] See, for instance, A. Aganbegian in *Sotsialisticheskiy trud*, No. 2, 1960 and E. Vielrose, *Rozklad dochodow wedlug wielkosci*, Warsaw 1960.

[96] The ratio of the highest to the lowest decile is also often used to describe the spread over a wider range of the curve, but the published distributions by income size are rarely refined enough at their extreme ends to permit precise calculations.

[97] The Soviet data refer to manual workers only, but there is little doubt that the variance of the whole universe of workers and employees would still be wider. In 1934, the quartile ratio for the administrative and clerical category amounted to 1.95 (compared with one of 1.82 for manual workers). See A. Aganbegian, *op. cit.*, p. 30.

TABLE 8.20

Some indicators of dispersion and skewness in the distribution of all workers and employees by monthly earnings

Indicator	Bulgaria			Czechoslovakia		Hungary				Poland			Soviet Union [b]		
	1957	1960	1962	1959	1964	1952	1955	1958	1964	1955	1960	1964	1934	1956	1959
Median [a] (Me)	63.1	72.8	81.6	1 338	1 469	783	975	1 348	1 611	960	1 565	1 813	..	..	..
Upper quartile [a] (Q_3)	80.8	94.5	104.1	1 684	1 836	1 045	1 283	1 745	2 044	1 335	2 110	2 426	..	..	..
Lower quartile [a] (Q_1)	50.4	56.6	65.2	1 041	1 151	601	750*	1 059	1 267	705	1 153	1 339	..	..	..
Quartile ratio $\left(\frac{Q_3}{Q_1}\right)$	1.60	1.67	1.60	1.62	1.60	1.74	1.70	1.65	1.61	1.89	1.83	1.81	1.82	1.85	1.84
Inter-quartile deviation $\left(\frac{Q_3-Q_1}{Me}\right)$	0.48	0.52	0.48	0.48	0.47	0.57	0.54	0.51	0.48	0.66	0.61	0.60	0.62	..	..
Skewness $\left(\frac{Q_3-Me}{Me-Q_1}\right)$	1.39	1.34	1.37	1.16	1.15	1.44	1.39	1.37	1.26	1.47	1.29	1.29	1.55	1.28	1.33

Sources: See Appendix Table 8.III; *Trud i zarabotnaya plata*, No. 10, 1961, p. 25; *Sotsialisticheski trud*, No. 2, 1960, p. 30; direct communication from the Central Statistical Office of Hungary.

[a] Values in national currencies.

[b] Manual workers only (it is not clear whether the data refer to all workers or to those in industry only).

Secondly, considering changes over time, it is seen that the years 1955-1960, which encompassed in Poland and Hungary the "consumption" phases of 1956-1958, were associated with a marked narrowing of income dispersion, indicating that within the general framework of basic rates revision that took place during that period, the lower paid workers and employees participated more than proportionately.[98] An opposite trend occurred in Bulgaria during the period of abruptly intensified activity in the late 1950s, as shown by the increase in the quartile ratio from 1.60 to 1.67 between 1957 and 1960; but the former value was soon re-established.

No distribution of earners by wage size is available for the Soviet Union, but one source [99] contains a chart (reproduced here in Chart 8.6) which shows the relative distributions of manual workers (presumably in industry) in 1934, 1956 and 1959. The same article also provides quartile ratios and measures of skewness of these distributions, which are shown in the last three columns of Table 8.20. It will be seen that during the two decades separating the first two dates, the spread of wages tended to widen. The impact of the first stages of the 1956 reform did not change the shape of the curve significantly,[100] except for the disappearance by 1959 of a curious bulge in the upper ranges of the 1956 curve. This bi-modality might have been due to the heterogeneity of the 1956 distribution, comprising an "alien" sub-universe of piece-rate workers benefiting from loose norms and/or progressive premia;[101] but too much should not be read into the curves, which seem to have been rather freely drawn from distributions arranged in uneven class intervals — themselves expressed as multiples of respective medians.

The post-1959 measures must, however, have had a considerably greater impact; according to a statement made by the Chairman of the State Committee on Employment and Wages in October 1961, the proportion of the workers receiving up to 40 roubles a month was reduced as a result of the wage reform by 75 per cent, of

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[98] For Hungary, the downward trend is also reflected in the declining values of the coefficient of variation:

1955	*1957*	*1958*	*1964*
42.0	37.5	35.3	36.6

Source: Direct communication from the Central Statistical Office of Hungary.

[99] M. Mozhyna, *Trud i zarabotnaya plata*, No. 10, 1961.

[100] The value of the quartile ratio hardly changed between 1956 and 1959 but the more sensitive "decile ratio" (the ratio of the 9th to the 1st decile) dropped from 3.38 in 1956 to 3.28 in 1959 (*ibid.*, p. 25).

[101] The relative distributions of piece-workers according to the percentage of norm fulfilment were as follows in Soviet engineering before and after the reform:

	Average per cent norm fulfilment	*Percentage of workers fulfilling norms*					
		— 90 %	91-100 %	101-110 %	111-120 %	121-150 %	150 % +
Before the reform . .	207.9	0.7	0.8	3.5	4.6	13.8	76.6
After the reform . .	125.7	5.7	4.6	21.3	19.7	32.3	16.4

Source: V. F. Mayer, *Zarabotnaya plata v period perekhoda k komunizmu*, Moscow 1963.

TABLE 8.21

Dispersion and skewness in distributions of some categories of wage-earners in Hungary and Poland

Country and category	Median monthly earnings *(national currency)*	Quartile ratio [a]	Inter-quartile deviation [a]	Skewness [a]
Hungary (1959)				
All wage-earners .	1 510	1.69	0.53	1.25
Males	1 742	1.60	0.47	1.17
Females	1 181	1.57	0.46	1.20
Workers	1 446	1.70	0.53	1.17
Employees . . .	1 691	1.75	0.57	1.47
Industry [b] . . .	1 574	1.56	0.45	1.29
Trade [b]	1 331	1.57	0.45	1.15
Poland (1962)				
All wage-earners .	1 639	1.89	0.65	1.42
Manual	1 570	1.88	0.63	1.27
of which :				
Males	1 786	1.77	0.57	1.26
Females	1 139	1.77	0.56	1.09
Non-manual . .	1 720	1.80	0.61	1.58
of which :				
Males	2 145	1.77	0.58	1.40
Females	1 430	1.66	0.49	0.98
Industry	1 824	1.78	0.58	1.28
Trade	1 382	1.76	0.58	1.33

Sources: Statistical yearbooks; A. Schmidt, *A személyi jövedelemeloszlás a szocializmusban,* Budapest 1964, p. 99.

[a] See Table 8.20 for definitions.

[b] 1962.

those earning 40-50 roubles by 60 per cent, and of those earning 50-60 roubles by 50 per cent. At the same time the share of workers receiving from 100 to 160 roubles per month almost doubled, whereas that of workers earning more than 160 roubles remained nearly constant.[102] This trend would be in line with the objectives set in the Seven-year Plan. These postulated that, within an overall increase of 26 per cent in the average nominal wages of all wage-earners, wages of the lower wage-group (below 60 roubles per month) would increase by 1965 by 45-60 per cent, those in the medium group (60-140 roubles per month) by 20-25 per cent, whereas those in the above 140 roubles bracket would remain nearly constant.

As mentioned above, in Poland and, to a lesser extent, in Hungary, wage-size frequency distributions have been published for some years, relating to some more narrowly defined and therefore more homogeneous categories of wage-earners. In Table 8.21, the relevant indicators of dispersion and skewness are shown for such categories as manual and non-manual workers, and for males and females, as well as for two economic sectors — industry and trade.

The comparison of the various coefficients between the two countries shows that the greater inequality of wages and salaries in Poland, which was found previously for all wage-earners, holds also for the special sub-groups listed in the table. Otherwise, differences in spreads found within each country between the various sub-strata seem to indicate no consistent pattern — except perhaps that little difference was found in either country between the dispersion of all income recipients in industry and in trade. There are no Polish data for all males and/or females (irrespective of whether manual or not). Within the manual workers category, the dispersion of men was very similar to that of women, but within the non-manual

TABLE 8.22

Dispersion of income distributions of males and females by some economic sectors and industrial branches, Poland, 1958

Quartile deviations

Sector or branch	Category	Males	Females
Transport and communications .	*Manual*	0.45	0.31
	Non-manual	0.54	0.26
Construction	*Manual*	0.58	0.63
	Non-manual	0.63	0.38
Administration	*Manual*	0.94	0.27
	Non-manual	0.72	0.55
Communal economy and housing	*Manual*	0.52	0.57
	Non-manual	0.46	0.41
State industry	*Manual*	0.54	0.38
	Non-manual	0.48	0.35
Energy	*Manual*	0.46	0.49
	Non-manual	0.52	0.33
Fuel	*Manual*	0.52	0.38
	Non-manual	0.71	0.38
Engineering	*Manual*	0.47	0.40
	Non-manual	0.37	0.37
Chemicals	*Manual*	0.41	0.32
	Non-manual	0.39	0.33
Food processing	*Manual*	0.53	0.28
	Non-manual	0.42	0.32
Textiles	*Manual*	0.37	0.34
	Non-manual	0.38	0.34

Source: E. Vielrose, *op. cit.*, pp. 64-65.

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[102] *Pravda*, 6 October 1961 and *Ekonomicheskaya Gazeta*, No. 21, 1961. According to L. Blakhman (*Proizvoditelnost i oplata truda v period razvernutogo stroitelstva komunizma*, Lenizdat 1964) the ratio of the average wage of the top 10 per cent of workers to that of the bottom 10 per cent went down as a result of the reform from 5.8 to 3.8 (for all workers and employees), p. 154. An investigation carried out by the Electro-technical Research Institute in 1960 showed that in that industry the number of workers earning less than 60 roubles and more than 160 roubles per month fell as a result of the reform. The value of the lower quartile went up by 3 per cent and that of the upper quartile fell by 1 per cent. The quartile ratio fell by 4 per cent and the decile ratio by 9 per cent (A. Ageeva, A. Tyklin, *Trud i zarabotnaya plata*, No. 12, 1961). A Leningrad inquiry showed that, among the industrial workers of the city, the coefficient of variation declined from 42.8 to 37.9 per cent as a result of the reform (L. S. Blakhman (editor), *Voprosy proizvoditelnosti truda i oplaty truda v period stroitelstva komunizma*, Leningrad 1964, p. 119).

earners groups the spread of salaries was definitely wider among men. In Hungary (in 1959) the dispersion of men's incomes was marginally above that for women. It is noteworthy that the variance of the distribution of salary-earners in Poland was smaller than that of wage-earners, the difference being accounted for entirely by the divergencies within the female working population. The reason may be the rather narrow definition of employment income used for the basic frequency distributions in Poland: it excludes some special rewards (premia and bonuses), which seem to affect non-manual workers more than manual workers and the weight of which tends to increase with the salary size. The frequency distributions of female earners, both manual and non-manual, show a remarkable symmetry in Poland, where skewness was distinctly more pronounced among males than among females and among non-manual than among manual workers in general. As in Hungary, the distribution of employees was much more skew than that of workers.

Finally, Polish data permit an analysis with finer breakdowns, which provide a better idea of the true magnitude of differences in the dispersal of incomes from employment among men and women. Table 8.22 indicates that earnings of women are in almost all sectors and branches more concentrated around the central values of the distribution than those of men; and this appears to hold for both manual and non-manual categories of workers, but the gap is wider among the latter. The exceptions to this rule seem to occur usually in these fields of activity where relatively few women work and where the average size of their earnings is relatively low — such as manual occupations in construction or in energy.

8.6. DETERMINATION OF INCOME FROM WORK IN THE CO-OPERATIVE SECTOR OF AGRICULTURE

(a) *The framework and policy objectives*

Since the economic activity of agricultural co-operatives depends on their own material and labour resources, the distribution of income from employment is primarily a matter for internal farm management and is not directly regulated by the central authorities. This does not mean, however, that the government neglects the importance of income distribution on co-operative farms as an instrument for allocating resources and for providing incentives to productive effort. Co-operative farm incomes are planned and regulated by price, fiscal and administrative policy measures; the co-ordinated national income balance, established on the basis of enterprise accounts, permits control over the yearly aggregates. The internal distribution of income on the farm is regulated by statutory rules which safeguard the fulfilment of obligations towards the state and a minimum level of farm accumulation. Although a framework for equitable remuneration according to the quality and quantity of individual labour input is provided in the co-operative farm statutes, the labour remuneration fund is in practice a residual magnitude which absorbs fluctuations in enterprise results.[103] The private household plot, as an adjunct to the collective farm, has, however, always provided something of a buffer against declines in earnings from the collective. At the national level, estimates of co-operative farmers' total incomes (from work in the collective, or individual holdings, and other sources) are aggregated in the balance of incomes and expenditures of the population.

The co-operative farms are linked to the process of national income redistribution mainly by the price mechanism (state purchases of agricultural products and state sales of capital goods and current inputs), by taxes on farm income, interest rates on credits, insurance payments, etc. Any or all of these means can be used for controlling state accumulation in the co-operative agricultural sector — i.e. which involves the problem of collecting economic rent in such proportions as to leave resources needed for capital formation on the farms. From the macro-economic point of view, the separation of responsibility for farm labour remuneration from the state sector has facilitated annual material and financial balancing. The establishment of obligatory or binding targets for deliveries to the state as the principal obligations of the farms should, in principle, assure a minimum level of planned consumption in the rest of the economy and the corresponding planned financial resources for the state budget. Moreover, with the use of planned reserves, the deficits and surpluses yielded by co-operative farm activity raise problems of macro-economic balancing, mainly in the year following the harvest. So long as part of labour remuneration in the co-operative sector is distributed in kind, the provision of retail trade goods to cover peasants' money demand presents no major difficulties. In lean years on-farm consumption is inevitably restricted, collective farm members having to fall back on resources from individual plots. With the strengthening of the industrial sector in the centrally planned economies, an increasing proportion of state accumulation has been returned to the co-operative-farm sector in the form of state investments, credits, and outright grants, and the burden of accumulation has been modified in favour of the farms by improved price relatives and reduced taxation.

The trends, composition and sources of growth of peasant incomes were examined in Chapter 7, section 7.5. It was noted there that the rate of income growth has been fairly rapid, generally exceeding that of other socio-economic groups, but also that an income gap — varying in extent, and largely depending on the importance of the agricultural sector in the economy — has remained.

One important objective of income policy in respect of co-operative agriculture has been the maintenance of large enough income differentials between co-operative farmers, state-farm workers, and non-farm workers to serve as regulators of labour movements. As a rule the wage and salary rates of state farm workers and employees have been taken as a measure for the guaranteed maximum level of corresponding co-operative farm members' income (including income from individual plots).[104] The mobility of labour within the co-operative farm sector and the manpower requirements of the state farms being limited, the main use of the differentials in question has been to encourage an outflow of labour from agriculture to other economic sectors. In this respect, they have, on the whole, been successful. However, as in all industrializing countries, the disproportionately large outflow of able-bodied young men has led to both a marked deterioration in the quality of farm labour (with adverse consequences for productivity) and to labour scarcities at prevailing levels of technique in some countries and in some regions. As a result, one motive underlying recent measures aimed at narrowing differentials, especially in respect of qualified labour, has been to retain a certain level and composition of manpower on the farms.

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[103] This general rule does not prevent well organized co-operative farms from planning — and even guaranteeing — a magnitude of the labour remuneration fund; this is becoming more and more common practice.

If income policy for the collective-farm sector in the period under review has been governed in the main by considerations of state accumulation, which happened to coincide with labour allocation objectives, its impact on incentives has generally been weak. The use made of price and fiscal policy instruments did not succeed in maximizing output and productivity. However, the problem of raising productivity in co-operative agriculture is connected not only with income incentives but also, and more closely, with policies in respect of investment, rationalization and specialization, full employment, industrial location, etc. For a fuller treatment of these issues, the reader is referred to the *Economic Survey of Europe in 1960*, Chapter IV. Here, it suffices to recall that, with agriculture moving up the planners' scale of priorities, a series of reforms of policy measures affecting farmers' income is under way. As part of the reform, the co-operative farms are likely to be given greater freedom to develop economic initiatives.[105]

In what follows, income policy in respect of collective farms is treated with reference to problems of differentiation of farm income, the standing framework for distribution of income from employment within the farm, and ensuing earnings differentials.[106]

(b) *The differentiation of collective farm income*

A prerequisite for implementing at the national level the principle of equal pay for equal work in co-operative agriculture is the creation of equal opportunities for ne income generation on farms that work under widel varying climatic, soil fertility and economic conditions Then the fundamental problem consists in determinin the level of economic rent accruing to farms as a result o their productive activity and in levying this rent in differentiated proportions by means of instruments of price fiscal and financial policy. As co-operative farms ar supposed to operate on the basis of their own resources the rent has to be so divided between the state and th farms as to guarantee adequate state accumulation leaving at the same time a sufficient share to the farm fo reproduction purposes.[107]

The question of differential rent in co-operativ agriculture has always been an important theoretica issue in the centrally planned economies. In marxia economic theory a distinction is made between "differential rent I" — arising from "natural" advantages — which should be levied by the state, and "differentia rent II", resulting from investment, hard work an efficiency, which should be retained at least in part b the farms for internal accumulation and incentives The practical difficulties of calculating rent and distinguishing between its two components have confined th issue to the sphere of theoretical debate, which revives eac time important changes in policy are envisaged.[10 In recent years the debate has been reopened in connexio with the enhanced role of agricultural prices as an instrument for regulating collective-farm income.

For as long as the system of compulsory deliveries a very low prices constituted the main mode of marketin agricultural products in the Soviet Union — i.e. unti 1958 — the problem of price differentiation was of mino importance. Delivery quotas could be established b local authorities in full knowledge of relevant farm conditions, and the impact of the prices was small Moreover, payments in kind for services rendered b state-owned MTS could be differentiated. These tw instruments (which were not always utilized in the mos efficient way for income differentiation) disappeare in the agricultural reforms of 1958.

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[104] In the Soviet Union, the plenary session of the Central Committee of the Communist Party in December 1960 recommended that collective farmers' income ought not to exceed average local industrial earnings, and whenever incomes in rich farms tended to become excessive, administrative pressure was exerted to channel surplus resources into communal projects, e.g. dwelling construction, building of roads, schools, hospitals, etc. See L. C. Blakhman, *Proizvoditelnost i oplata truda v period razvernutovo stroitelstva komunizma*, Lenizdat 1964, p. 158.

[105] For suggestions concerning consistent developments in that direction, see V. G. Vensher, *et al.*, *Proizvodstvo, nakoplenie, potreblenie*, Moscow 1965, pp. 255-303.

[106] The discussion is hampered by shortage of statistics. For a fuller account of management and incentive problems in the co-operative farm enterprises, the reader is referred to *Economic Planning in Europe*, *op. cit.*, Chapter VI, pp. 45-48.

[107] The computation below, reproduced from V. G. Vensher *Kolkhozni stroi na sovremennom etape*, Moscow 1966, p. 80, give an approximate idea of the importance of state accumulation an farms' net product in Soviet co-operative agriculture in th 1958-1963 period:

Net and gross product of collective farms at current prices
(billions of roubles)

	1958	*1960*	*1962*	*1963*
1. All expenditures	16.6	14.1	16.4	16.6
of which :				
a. material	8.8	6.9	8.0	8.3
b. labour remuneration	7.8	7.2	8.4	8.3
2. Total "surplus product"	15.6	13.6	14.9	15.1
of which :				
a. income tax	1.0	0.9	1.0	1.0
b. Budget revenue via the price mechanism	10.6	10.0	10.0	10.3
c. net income left with the co-operative farms	4.0	2.7	3.9	3.8
3. Net product (1.b + 2)	23.4	20.8	23.3	23.4
4. Gross product (1 + 2)	32.2	27.7	31.3	31.7

[108] For an extensive discussion of the problem of differential ren in co-operative agriculture in the Soviet Union see *Ekonomik selskogo khozyaistva*, No. 11, 1963, pp. 89-96; No. 6, 1965, pp. 88-97 and L. D. Logvinov, *Differentsialnaya renta i ekonomika kolkhozo* Moscow 1963.

The abolition of compulsory deliveries and the estabshment of unified prices for all deliveries to the state in 958 brought the problem of price relatives to the foreront. The new purchase prices for grain and other agriultural products were differentiated by climatic-economic egions; their level was initially set so as to cover the roduction expenditures of the farms and to allow for ecessary farm investments (a particularly important oint in connexion with the sale of the MTS machinery o the farms). A "sliding scale" permitting adjustments in elation to output conditions, in particular years and in articular zones, was also introduced. However, this cale was applied only in the first year, i.e. in 1958, when veather conditions were especially favourable. Prices vere lowered and no further adjustments were made in he following years.[109] The state purchasing prices had noreover been established on the assumption of stable rices for machinery and current inputs; but these tended o increase. And the purchase of MTS machinery, under revailing credit conditions, was a heavy burden for conomically weak co-operative farms. It soon became evilent that the 1958 price regulation was inadequate — or one thing, it was generally reported to have widened arm-income differentials. The zonal differentiation of rices did not make sufficient adjustments for differences n climatic and soil conditions and the structure of price elatives for products worked, on the whole, to the lisadvantage of farms located in livestock and dairy roducing districts and regions. Substantial price correcions were introduced in 1962, and again in 1965.

The recurrent issue of prices is closely linked to the act that it has been very difficult to find a proper basis or differentiation in Soviet conditions. The adequacy of he differentiation of farm income ultimately depends on he possibilities of assessing the potential value of the and, which is connected with the problem of differential ent. In the absence of an autonomously functioning narket, the land has to be classified by reference to ome objective system of qualitative evaluation. In most astern European countries fairly satisfactory land cadasers seem to exist, but in the Soviet Union no cadaster on a national, or even republican, level has so far been stablished. This deficiency has been a serious handicap, specially when the recent price reform was prepared.[110]

The problem of finding adequate indicators for diferentiating price and other policy instruments has been urther complicated by difficulties in evaluating (with ny degree of objective accuracy) costs of production, and herefore net income, in co-operative agriculture, as long s labour remuneration is treated as a residual item in the arm accounts. With the traditional *trudoden* payment ystem there was no possibility of even inter-farm comarisons of labour input, since the work norms behind the *rudoden* varied widely. In later years the collective farms have been obliged to draw up accounts in man/days, which has enabled hypothetical collective-farm cost calculations to be prepared on the assumption that members are paid at state-farm wage rates. Official statistics also give information on costs of production at actual labour payments, and according to recent data average discrepancies are now relatively small.[111] Overall comparability will also be improved when the 1966 decree on planning of labour remuneration fund (at state-farm wage rates) as an integral part of farm costs takes effect. In the traditional system, farms with a low level of labour remuneration often appeared more "profitable" than farms with a high level.[112]

The haphazard impact of the fiscal system on collective farm income differentials is also due to the lack of an adequate basis for income assessment. Up to 1965 taxes were levied at an average rate of about 12 per cent (somewhat differentiated by zones) on collective-farm "gross income", including such costs as labour remuneration, unfinished production, compulsory and optional insurance payments, and a number of other expenditure items. As a result, many collective farms paid taxes even when expenditures (if labour costs had been included) were not covered by income. Taxes were, moreover, levied on the preceding year's results, creating difficulties for economically weak farms in years when incomes declined. The changes introduced by the decree of 10 April 1965 have largely improved the situation. Taxes are now paid at a rate of 12 per cent on net income received by the collective farms from agricultural production, the rendering of services, and auxiliary enterprises and trades. Moreover, an amount of net income equivalent to a "profitability"[113] rate of 15 per cent is exempt from tax. The labour remuneration fund is taxed separately at a rate of 8 per cent, but only for the part exceeding the amount of average monthly payments per full-time worker of 60 roubles. All taxes are to be paid on estimated income in the current year, with end-of-year adjustments.

The official recommendation to collective farms to introduce, beginning on 1 July 1966, guaranteed payments (in cash and in kind) for the labour input of members, at the same rates and working norms of the corresponding categories of state-farm workers, is likely to promote rationalization of farm incomes, especially as the State Bank is allowed to grant credits to meet collective-farm needs for up to five years in the 1966-1970 period.

No adequate statistics are available to show actual income differentials between collective farms in the Soviet

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[109] See V. P. Boev, *et al*, *Ekonomicheskie stimuli ukreplenya konomiki kolkhozov*, Moscow 1964.

[110] Work on the elaboration of a cadaster is now progressing on an xperimental level in several republics, under the supervision of the ll-Union Ministry of Agriculture. See *Ekonomika selskogo hozyaistva*, No. 10, 1965, pp. 76-84. The Ukrainian Ministry of griculture expects to complete a cadaster for the whole republic n 1967 (see *Ekonomicheskaya Gazeta*, 29 September 1965, p. 21).

[111] *See Narodnoe khozyaistvo SSSR v 1964 godu*, p. 818.

[112] The influence of internal farm-income distribution on apparent "profitability" can be illustrated by the following 1964 data from three Byelorussian collective farms:

Farm	*Production costs*	*Net income*	*"Profitability"*	*Labour remuneration per man/day in the collective sector*
	Thousand	*roubles*	*Percentage*	*Roubles*
"Rassvet"	2 006	1 008	50	5.19
"Novii byt"	636	412	65	2.89
"Rodina"	96	49	51	1.47

Source: Finansy SSSR, No. 8, 1965, p. 15.

[113] Defined as the ratio of net income to production costs.

Union, or to quantify the effects of various policy measures. Table 8.23 indicates collective-farm gross money receipts per household by republics, but money receipts are, of course, only part of farm income. Table 8.24 illustrates the distribution of collective farms according to gross money receipts per 100 hectares of agricultural land. Neither table permits, however, any very significant generalizations.

Nevertheless, it is clear that if, in the past, government policy in respect of collective-farm incomes concentrated on the state accumulation aspect, and — in respect of internal income distribution on the farm — was more concerned with investment than with rewards to labour, recent changes in national income redistribution in favour of the farm sector will permit a more rational utilization of farm income differentials as incentives to productive efforts.

The problems of collective-farm income differentiation in the eastern European countries have been very similar to those described for the Soviet Union. In the earlier part of the period, state accumulation in the co-operative sector was secured mainly by compulsory deliveries at low prices, as in the Soviet Union. The marketing system was changed, and unified state purchasing prices introduced, in Hungary in 1956, in Rumania in 1957, in Bulgaria in 1959 and in Czechoslovakia in 1960; in eastern Germany compulsory deliveries of major livestock products are still maintained. Differentiation of farm income has generally been regulated by differentiated prices and taxes, or by direct state grants related to some evaluation scale for climatic and soil conditions; in eastern Germany land is valued by "points" in accordance with the net income which can be derived from it by good husbandry.

The methods of farm income differentiation for long applied in Czechoslovakia deserve special mention, not only because they represent an extreme case, but al for their acknowledged negative effect on farm incentive As a rule, state purchase prices were established at a lo and uniform level, as near as possible to production cos (so as to collect a substantial part of the economic ren Farm activity was to a great extent financed by long-ter credits, which later had to be cancelled. This procedu did not encourage efficient utilization of resources, a other forms of government aid had to be devised. In 19 direct investment grants amounted to about 25 per ce of total co-operative investments; selected seeds, oth inputs, as well as machinery and extension services a provided at very low prices. Great importance is als attached to direct financial aid, which is differentiat by 5 economic zones; in 1962 the share of such financ aid in total money receipts per hectare of agricultur land ranged from about 2 per cent in the maize-growi areas to 22 per cent in mountainous regions.[114] As f highly qualified manpower, government aid for the pa ment of salaries was introduced in 1959, but abusi utilization of this advantage led to its abolition in 196 In spite of a rather wide differentiation in state grants regions, a great disparity in farm income levels appears have persisted.[115] It has further been recognized that th direct aid policy had a very limited incentive effect, a a new approach has been introduced. In January 196 state purchasing prices were substantially raised a agricultural taxes lowered. Direct state grants have be maintained for the time being, but greater empha will in future be put on prices, credits and income-tax for the regulation of co-operative farm income.

TABLE 8.23

Collective-farm money receipts per household, by Soviet Republics

in roubles

	1952	1958	1960	1964
Total	215	702	781	1 127
RSFSR	153	682	821	1 204
Ukraine	184	610	632	1 008
Byelorussia . . .	60	366	428	635
Uzbekistan . . .	1 084	1 582	1 496	1 832
Kazakhstan . .	231	1 680	1 562	2 053
Georgia	312	510	497	535
Azerbaidjan . .	392	658	688	779
Lithuania . . .	85	410	593	940
Moldavia . . .	229	655	673	1 079
Latvia	266	765	1 017	1 222
Kirgizia	384	1 123	1 226	1 815
Tadjikistan . . .	1 053	1 128	1 102	1 416
Armenia	310	678	684	851
Turkmenistan .	1 055	2 134	1 833	1 919
Estonia	254	749	1 152	1 605

Source: National statistics.

TABLE 8.24

Distributions of collective farms according to gross mon income per 100 hectares of agricultural land

Percentages

Annual income group	1953	1958	1964
Below 500 roubles	24.3	1.1	1.1
500-1,000	25.9	2.5	
1,000-2,000	21.8	11.9	3.1
2,000-3,000	10.2	16.6	5.3
3,000-5,000	8.8	23.5	15.6
5,000-10,000	5.1	27.0	32.6
10,000-20,000	1.9	13.6	28.6
More than 20,000	2.0	3.8	13.7

Sources: Statistical yearbooks.

In eastern Germany, regulation takes place by combined system of differentiated compulsory deliver for livestock products, and outright state grants. Refo is under consideration, but the immediate abolition compulsory deliveries would possibly lead to undesira differentials, and the elaboration of a co-ordinated syst economic levers, based on zonally differentiated prices, come taxes and credits, has been proposed.[116]

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[114] See *Ekonomika selskogo khozyaistva,* No. 10, 1965, p. 1

[115] Financial aid per hectare of agricultural land in 1961 vari from 47 Kčs in the beet-growing region to 261 Kčs in the mounta ous regions (1:5.5), whereas the ratio between money receipts hectare was 1:2.5 (*ibid.,* p. 114).

It is impossible on the basis of available statistics to ovide any account of the spread of co-operative-farm come differentials in the Soviet Union and eastern uropean countries; but all disposable evidence suggests at they are fairly wide.

Determination and differentiation of labour remuneration within the co-operative farm

The level of co-operative farmers' remuneration for ork in the collective sector depends, in the first instance, the net income of the farm, as determined by govern-ent price and fiscal policy measures; but it is also eatly influenced by statutory regulations and farm anagement policy concerning income distribution ithin the farm. A minimum percentage allocation of oss money receipts to the farm investment fund is nerally imposed by the central authorities; otherwise, e co-operative farm is rather free to decide on the stribution of funds. Its decisions have a direct bearing on e residual available for labour remuneration, and thereby the level of individual members' earnings. It is obvious at richer collective farms can more readily afford a gh investment ratio, without serious damage to the aterial incentives of the farmers, than economically eak farms. A rather high degree of inverse correlation etween the share of the consumption fund and the level labour remuneration is therefore to be expected, as oviet data in Table 8.25 relating to farms in the ten gions of the RSFSR seem to show. Prevailing regulations r internal income distribution have been severely iticized in recent years, and changes in the basic model atutes are on the agenda in most countries. The basis r allocations to the investment fund is recognized as inappropriate, since gross money receipts reflect neither the disposable income nor the needs of the farms. With the growing monetization of the peasant economy, there has been a tendency to exaggerate the share of investment at the expense of labour remuneration.[117] Generally, attempts are being made to guarantee a certain minimum distribution to members for their work and to introduce labour remuneration as a planned cost item in the farm accounts (see section 8.6 (*a*) above).

There are at present two basic systems for the distribution of the labour remuneration fund:

(*a*) payments in cash and in kind according to the traditional "*trudoden*" system, which can be guaranteed, or have only a residual character;

(*b*) monthly cash payments according to tariff rates.[118]

No matter which system is used, the co-operative farms have — in common with the wage and salary system of socialist non-agricultural enterprises — a standing framework for distribution to workers in accordance with the quality and quantity of labour input, the principles of which are defined in the model statutes. All typical jobs in a collective farm are evaluated and classified. For the pay of rank-and-file members — corresponding to the production workers in industrial enterprises — scales with a certain number of skill grades are established for the main branches of activity, e.g. tractor work, livestock

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[116] *Agrarökonomie*, No. 2, 1966, pp. 75-83.

[117] According to a Soviet expert, allocations to the "indivisible fund" increased 2.65 times in the 1957-1962 period, whereas payments per man/day rose by only one-third. See V. P. Boev, *et al.*, *Ekonomicheskie stimuli i kreplenya ekonomiki kolkhozov*, pp. 17-19.

[118] In 1964 about 20 per cent of the collective farms in the Soviet Union applied the system of monthly cash payments; 31 per cent of all man/days worked were paid on a guaranteed basis, the share varying considerably by republics, amongst the most advanced being Uzbekistan — 80 per cent and Estonia — 94 per cent (see *Voprosy ekonomiki*, No. 10, 1965, p. 95).

TABLE 8.25

Selected distribution indicators, for collective-farm incomes, by economic regions of the RSFSR, 1962

Region	Collective farm money receipts per household	Labour remuneration per man/day	Average farm consumption fund *of which:* Labour remuneration	Collective consumption	Average farm accumulation fund: Productive	Non-productive
	Index : lowest level = 100		*Percentage of gross farm income*			
North-west	146	*100*	88.6	1.8	9.1	0.5
Central	131	102	77.0	2.6	19.5	0.9
Volgo-Vyatsk	*100*	108	70.9	1.3	27.6	0.8
Central black-soil	158	134	66.5	4.1	28.9	1.1
Ural	243	136	63.4	5.2	30.0	1.4
Western Siberia	264	156	73.6	2.6	22.3	1.5
Eastern Siberia	203	162	68.5	3.7	26.4	1.4
Povolshe	226	169	55.5	4.5	39.1	6.9
North Caucasus	268	199	55.7	6.1	36.4	1.8
Far-east	509	209	59.4	3.8	35.5	1.3

Sources: National statistics; V. G. Vensher, *Proizvodstvo, nakoplenie, potreblenie*, Moscow 1965, p. 291.

rearing, horse-ploughing, etc., transport, repair work, construction, etc. Piece-working being the predominant form of labour organization, great importance is attached to the establishment of work norms; depending on the branch, these norms are generally expressed in terms of the time necessary to carry out a given task or in terms of a definite quantity of output.[119] Since scales and working norms are matters of internal concern to the farm, no uniformity is to be found at the national level. The same is true for the value of the skill grade rates, whether defined in numbers of *trudoden* or in money.

Tractor drivers and farm mechanics are generally paid according to a separate scale. Payments to managerial, technical and administrative staff are as a rule established as a set number of *trudoden* (in which case they vary with the economic results of the year), or as a fixed cash sum. The pay of a collective-farm chairman is often calculated as a percentage of planned net income and is disbursed monthly at a rate of, say, 70 per cent, with end-year adjustments. Difficulties in securing qualified technical staff for Soviet collective farms induced the authorities to recommend in 1962 that agricultural experts be paid monthly salaries at the same rate as on state farms; and that the salaries of senior technical staff ought to be within the range of 80-90 per cent of the remuneration of the chairman.

The co-operative farms also operate numerous systems of individual or collective premia, which are linked to the fulfilment or overfulfilment of certain indicators and calculated as a percentage of the value or quantity of output.

The *trudoden* system is still the predominant mode of payment in the co-operative sector of agriculture in all the economies of the region, but it is clearly on the decline, and its irrationalities are coming in for severe criticism. The *trudoden* was introduced in the Soviet Union in 1931 as a means of job rating and as an abstract accounting unit for labour input, the value of which could be established only when yearly farm results were known. (It is obtained as a quotient of the income available for individual consumption and the total number of *trudoden* spent in the course of the year.) The *trudoden* is neither a uniform measure of time spent on work nor is it equal to a working day. It is a predetermined unit allocated for varying amounts, types and quality of work performed; in order to derive time measures, the *trudoden* have to be converted into man/days.[120] T
conversion factors naturally vary widely between countri
between geographical regions — and also between bra
ches of agricultural production within one farm. Da
on payments per *trudoden* are therefore very difficult
interpret.

In most of the farms applying the *trudoden* syste
payments for work are made partly in cash and par
in kind. The proportions were most important in t
earlier years of the period, when the in-kind eleme
could be sold on the free market at favourable pric
The monetization of payments has been progressing
all countries, however, as illustrated by the data bel
for the Soviet Union:

Share of cash in total labour remuneration on Soviet collective farms distributing according to *trudoden*[a]

Percentages

	1953	*1958*	*1959*	*1960*	*1961*	*1962*	*19*
USSR	33.9	56.5	58.6	60.2	60.9	64.7	73
of which: RSFSR .	21.1	52.7	53.7	53.7	57.7	58.7	67

Source: Voprosy ekonomiki, No. 7, 1965, p. 29.

[a] Payments in kind valued at state retail prices.

The relative level of payments per man/day, a
the share of cash by republics, in 1963, are shown
Table 8.26. Republican differentials in levels of remune
ation would seem to be somewhat wider between far
applying the *trudoden* system (1:2.5) than between far
applying a tariff system (1:2.0).

Little information is available on differentials in ea
ings from work in the collective sector, by occupational
sex categories. Such differentials are meaningful only
terms of yearly earnings, and as such they depend to
large extent on employment opportunities, which are mo
simple and regular in the livestock sector, and in auxilia
enterprises, than in the crop sector; differences in m
and female average earnings are largely explained by t
fact that female workers are concentrated in the latt
The following data for Bulgaria illustrate the first poi

Income differentials by agricultural branch in Bulgaria in 196

	Average yearly income per active member	*Man/days perform*
	Indices	*Numbers*
Average for all branches . .	100	197
Crop sector	81	160
Livestock sector	206	325
Auxiliary enterprises . . .	130	254

Source: Dokhody na TKZS, Sofia 1964, pp. 376-378.

NOTE. — The relative percentage shares of female workers, in the same
were as follows: total co-operative farm employment — 51; crop cultivation —
animal husbandry — 20; mechanized work — 2; auxiliary enterprises — 6;
struction — 3; management — 7; administration — 32.

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[119] In the Soviet Union, on farms using *trudoden* accounts, the most widely used scale for horse-manual work would seem to be the following:

Skill grades	I	II	III	IV	V	VI	VII	VIII	IX
Numbea of *trudoden*	0.5	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50

A member carrying out a job classified in category III, e.g. potato planting, would then be credited the equivalent of 1 *trudoden* by fulfilling the work norm. In the livestock sector it is more common to allocate a certain number of *trudoden* per quantity of output, for instance 2.2—4 *trudoden* per milking output of 100 litres.

Farms which have adopted monthly cash payments usually apply a 6-grade scale with a spread ratio of 1:2, as in state farms. The money value of the first grade is established by the co-operative farm, however, in accordance with the planned fund for labour remuneration.

See *Ekonomika organizatsia i planirovanie selskokhozyaistvennogo proizvodstva*, Moscow 1963, pp. 398-400.

[120] This is important not only for income but also for producti
comparisons. In the Soviet Union until 1957 annual collective fa
reports did not contain man/day data. Time utilization was rep
sented only by the number of *trudoden* earned. The average ra
between *trudoden* and man/day seems to have varied considera
over time, with a definite upward tendency evident in the post
period: 1:1.6 in 1950 and 1:1.68 in 1955 (see J. S. Kuvshin
et al., *Ekonomika sotsialisticheskogo khozyaistva*, Moscow 19
pp. 77-78).

TABLE 8.26

Labour remuneration per man/day in Soviet co-operative agriculture, by republics, 1963

Index numbers : national average = 100

Republic	Collective farms applying *trudoden* system		Collective farms applying tariff system	
	Total	Share in cash	Total	Share in cash
Total Soviet Union	100	73.6	100	92.4
RSFSR	97.5	67.3	94.2	89.2
Ukraine	101.8	77.7	92.0	90.3
Byelorussia	81.0 *Min.*	68.9	70.2 *Min.*	92.4
Uzbekistan	206.7 *Max.*	90.8	115.1	99.6
Kazakhstan	166.9	81.3	122.2	86.9
Georgia	85.9	63.6	143.6 *Max.*	98.1
Azerbaidjan	94.5	72.1	96.4	99.1
Lithuania	81.6	67.7	77.3	93.1
Moldavia	108.0	77.8	98.7	90.5
Latvia	92.0	86.7	89.3	94.5
Kirgizia	163.8	86.5	135.1	85.2
Tadjikistan	99.4	70.4	106.7	100.0
Armenia	124.5	61.6 *Min.*	130.7	98.6
Turkmenistan	182.5	97.0 *Max.*	116.4	99.6
Estonia	119.0	89.2	111.6	97.2

Source: V. A. Morozov, *Trudoden, dengi i torgovlya na sele*, Moscow 1965, pp. 139-143.

The same incidence of employment opportunities on rmers' yearly income from work in the collective sector shown in the Hungarian farm accounts for 1962: rmers specializing in livestock breeding earned on erage twice as much as those engaged in crop farmg.[121]

However, less work in the collective sector may enable rm members to carry out more work on the individual usehold plot, or outside the co-operative farm, and is tends somewhat to reduce the dispersion of total comes within each farm. Government policy with gard to the plots is, therefore, of great importance for come equalization in the collective-farm sector, but nnot be discussed without taking into consideration combined household incomes, which are treated in Chapter 9.

In conclusion it may be remarked that even if minimum rates of labour remuneration in the collective-farm sector was raised to the level of wages in the state farms — as is the present tendency in the Soviet Union and most other countries of the region — the average yearly incomes from work of farmers in the collective sector will in the long run depend on the scope for increasing employment opportunities — although the change in policy towards individual plots may bring some temporary improvement. The Soviet decision to remove all restrictions on the establishment by the collective farms of special enterprises for processing agricultural products, and the proposal that more light industries should be located in rural areas, may bring greater benefits than a possible increase in rates of pay.

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[121] See *Statisztikai idöszaki közlemények*, No. 57, Central Statistical fice, Budapest 1963, p. 206.

8.7 RESOURCE ALLOCATION, PRODUCTIVITY AND INCOME DISTRIBUTION

The main features of the systems and methods of stribution of personal incomes from work in the cenally planned economies, and their effect on actual rnings at various cross-sections of the economy, were scribed in the earlier sections of the chapter. In order throw some light on the internal logic of the procedures, seems appropriate to devote the conclusion of the apter to consideration of the distribution mechanism its macro-economic setting, where such questions have be resolved as the adjustment of personal income in lation to economic growth and changes in the structure national income utilization required by general policy jectives.

In economic systems with central planning of resource allocation, labour income policy has always been implicit. At the macro-economic level, total remuneration to labour as a factor has to be so controlled as to provide the necessary margin of manœuvre for changing the shares of final demand components in accordance with economic development plans. Within a system of material balances, where resources are allocated mainly by physical planning at centrally determined prices (which usually are stable for a given plan period), the real income of the population corresponds to the volume of commodities and services received by it. The distribution and redistribution of national income takes place in nominal terms, however, and in relation to financial planning raises several equilibrium problems which basically concern, on the one hand, transactions between the state and the enterprise sector and, on the other, transactions between the state and the household sector. Put simply, it may thus be assumed that balance has to be established so that the net revenue accruing to the state matches expenditures on investments and collective consumption (including payments to labour in non-productive services) and net foreign payments; and that the money incomes of labour in productive and non-productive services correspond to the value of commercial supplies of consumers' goods and services, and private saving. Within this framework, the prices for the services of labour acquire a real economic meaning: in the form of wage costs, they influence state accumulation; in the form of labour income, they determine consumption demand.

Viewed in this way, the share of wage costs in the value of output may be considered as a sensitive indicator reflecting the macro-economic relationships between resource allocation, labour income and productivity. In conditions of price stability, constant technology, and an unchanged structure of national income distribution, average labour incomes increase *pari passu* with productivity and cost shares remain stable. This axiom can be taken as the starting point for dynamic analysis.[122] A development strategy aimed at changing the rate of economic growth (and retaining the first two conditions) will require a shift in the structure of final demand components, with consequences for private consumption. With rapid industrialization as the paramount objective, the strategy followed in the centrally planned economies during the past fifteen years has implied a falling ratio of personal consumption to national product.[123] For practical income policy purposes, the guiding rule has generally been formulated to the effect that total production must increase faster than the total wage bill, or (introducing the employment factor) that the growth of productivity must exceed the growth in average real wages.[124] In all the centrally planned economies, this relationship — the reciprocal of which w be referred to in what follows for the sake of brev as the coefficient b[125] — has proved important as empirical instrument for achieving equilibrium betwe private consumption and personal incomes under vario patterns of resource allocation. The network of data a information necessary for a fully consistent applicati of the theory would seem, however, to have been dev oped only in recent years.

It is now generally recognized that the tradition method of planning by macro-economic balances longer provides central planners with an adequate t for investigating the quantitative interrelationships the economy in order to achieve an optimal allocati of resources, while at the same time paying due rega to problems of income equilibrium. Mathemati methods of solving global and partial problems structural changes in national income distribution steadily gaining ground, and increasing attention is bei given to input-output analysis as an auxiliary meth for clarifying relationships;[126] but so far as income a wage aspects of planning are concerned, no gene research results have so far been published in any of t centrally planned economies.

Since the input-output approach to the income poli problem as it appears in a centrally planned econo would make it possible to highlight some of the mo significant quantitative relationships which form t links between resource allocation and distribution personal incomes from work, an attempt has been ma to develop an illustrative example on the basis of statisti data derived from a real economic situation. For mo countries, officially published information is still ina quate for the purpose, but data relating to the Poli economy in 1957 and to the Bulgarian economy in 19 permit, with a few simplifying assumptions, the ba flow matrices to be compiled.[127]

The transactions tables have been established for fo broad material production sectors: agriculture, consum goods industry, investment-goods industry, and oth material productive sectors (transport, communicatio trade and others). The main criteria for the aggregati pattern are the characteristic features of the int dependence between output and final demand componen and of the links between income and output growth the various sectors, as determined by the income dist butive systems. Final demand has been divided into fo components: private consumption, collective consum tion, investment, foreign trade and others. The val added has been broken down into two broad ite income from (productive) employment and gross pro accruing to the socialist sector.[128] Because of lack of precise information on direct taxes and saving, the sum of personal incomes (i.e. the total income of the population) is by definition equal to private consumption. Moreover, for the sake of convenience, the item representing the difference between the total income of the population, thus defined, and income from productive employment, is referred to as net personal income from the government. This item is equal to income from non-productive employment *less* net cash transfers from the population (direct taxes *less* social benefits) to the government *less* savings of the population.[129]

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[122] In order not to overburden the text, the theoretical framework, the methods and the formulae applied in the following exposition, as well as the detailed results of various computations, have been described and explained in a technical note annexed to this chapter (see Appendix 8.I).

[123] A fall in this ratio may reflect not only an increase in the investment ratio but also a relatively faster rise in transfers in kind than in personal consumption. In general (see Chapter 7) living standards are affected by the distribution of the other components of final demand into productive investment, non-productive investment, current expenditure on general-government functions such as administration and defence, and current expenditure on education, health and social welfare. The latter item, together with the related non-productive investment, has increased comparatively fast in the centrally planned economies.

[124] The principle appears to have been expressed in this form for the first time at the plenary session of the Central Committee of the Soviet Communist Party in August 1924 in the following way: "The growth of labour productivity has to exceed the rate of growth of wages. Only under such conditions will it be possible to create the material basis and accumulate resources for increase in wages, expanded reproduction . . . satisfaction of ever growing cultural needs, education of the young generation, state administration and defence." See L. C. Blakhman, *Proizvoditelnost i oplata truda v period razvernutogo stroitelstva komunizma*, Leningrad 1964, p. 279.

[125] See Appendix 8.I.

[126] See the case studies submitted by the Soviet Union, Bulga Czechoslovakia and Hungary to the fourth meeting of Se Economic Advisers to ECE Governments, and reproduced *Macro-economic models for planning and policy making* (*Econo Survey of Europe in 1966*, Part 2), ECE, Geneva (to be publis early in 1967).

[127] See *Rocznik Statystyczny*, 1961, pp. 62-63 for Poland; di communication from the Central Statistilca Office, for Bulga

The exercise may be treated as a problem of economic policy, in which it is necessary to extricate certain "data" (or external variables) and instruments (or policy variables), and to define the targets to be achieved. In the case chosen for the illustrative exercise, the main economic proportions in the reference year, and the key policy variables for the implementation of a chosen strategy of future economic development, have been considered as "data" in relation to an income policy problem. On the basis of the input-output tables as described above, the "data" have been specified as follows:

(i) the structure of gross output, final demand and its components in the base period;

(ii) the share of wages in the value of gross output (or the wage cost per unit) in the base period;

(iii) the technology (or production functions) in particular industries in the base period;

(iv) the rate of change in the levels of final demand components.

The first three items have been taken to represent the "data" describing the economy in the reference period, and the fourth item defines the parameters for future development.

The policy target consists in achieving equilibrium between household incomes and consumers' supplies, and, consequently, between the revenue accruing to the state and the volume of collective consumption, investment and net foreign receipts. The relation between the growth of the incomes of the population and the growth of output constitutes the decisive policy variable.[130] In given conditions of the exercise, it follows, implicitly, that the economy is supposed to be in overall balance in the initial situation, and that prices and production functions are assumed to remain stable.

In their final destination, wages and salaries in different sectors constitute a determinate, and usually varying, share in the value of final demand components. Any shift in the pattern of resource allocation will bring about corresponding changes in income levels. The sum of such induced changes — in agriculture, in the enterprise sector, in non-productive service activities — and changes in transfer incomes, direct taxes and savings of households should equal the changes in supplies for private consumption. A close correspondence between the growth of personal incomes and the growth of output in the agricultural and the enterprise sectors can exist only if shifts in the structure of national income utilization are of small significance. Any change in the respective shares of private consumption, collective consumption, investment and foreign trade implies divergent rates of growth.

The information on wages paid per one unit of final demand component, obtained from the input-output tables, allows — under various assumptions concerning rates of change in final demand components — the permissible increase in incomes (or in wage costs per unit of output) to be calculated. Actual data for Poland in 1957 and for Bulgaria in 1960 are reproduced in Tables 8.30 and 8.31 of the technical note.

The coefficient b, or the ratio between wage and output growth (as defined in the technical note), serves as an indicator. When the share of wages in the value of output remains unchanged, the coefficient will be equal to one, i.e. income growth is parallel to production growth. If the share of wages in the value of output increases, incomes grow faster than production and $b > 1$; if the share decreases, the relationship is inverse and $b < 1$. It should be noted that any change in employment which affects average productivity will have corresponding consequences for average wages, i.e. its impact on the investigated relationship is neutral. The permissible increase in average wages is, therefore, equal to the increase in productivity multiplied by the coefficient b.

Table 8.27 indicates the various values of the average coefficient b and the marginal coefficient b′ for the economy as a whole and for the industrial enterprise sector, which are obtained on the basis of the Polish and Bulgarian data mentioned above,[131] for four imaginary alternatives of resource allocation and three variants of income policy in respect of the industrial sectors.[132]

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[128] No attempt has been made to distinguish between the various components of gross profits such as depreciation and turnover taxes.

[129] According to rough estimates, the sum of net cash transfers from the government and saving amounted in Poland in 1957 to between 5 or 6 per cent of total income from productive and non-productive employment. See the technical note in Appendix 8.I for a precise description of the various items.

[130] It would, of course, be possible to consider other variables — for instance, price policy and promotion of technical progress; the latter instrument would be valid for long-term strategy, whereas the former could be applied equally for short-term purposes.

[131] The close correspondence in the results of the computations for the two countries can be explained by their great similarity in their economic structure, both countries representing agricultural economies at an advanced stage of industrialization (see also the employment data presented for Poland in 1955 and for Bulgaria in 1960 in Table 8.28).

[132] In considering the results obtained, allowance should be made for the basic assumptions on which they rest. It is, for example, assumed that the structure of each component of final demand remains unchanged. This assumption is much less unrealistic for the structure of domestic deliveries to private consumption, collective consumption and investment, than for the distribution of the foreign trade balance by the four production sectors distinguished. The latter cannot but be affected by alternative sets of growth rates for the three components of final domestic demand. On the other hand, the net balances of foreign trade constitute comparatively small items in the exercise. Another basic assumption is constant technology, which implies parallel development of sectoral, final, and gross output. This assumption is obviously unrealistic in conditions of rapid diversification of industrial output. In practice, planners had, therefore, to operate with ratios between growth of output and growth of wages obtained at a very low level of aggregation.

TABLE 8.27

The ratio between income and output changes

Alternative	The increase of final demand components (percentages)					Poland, 1957						Bulgaria, 1960					
						Total ratio		Partial ratios for industry				Total ratio		Partial ratios for industry			
	I_c	I_s	I_g	I_f		Variant A[1]		Variant B[2]		Variant C[3]		Variant A[1]		Variant B[2]		Variant C[3]	
				Poland	Bulgaria	b_0	b'_0	$b_{2,3}$	$b'_{2,3}$	$b_{2,3}$	$b'_{2,3}$	b_0	b'_0	$b_{2,3}$	$b'_{2,3}$	$b_{2,3}$	$b'_{2,3}$
I	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
I	10	10	10	10	10	1.00	1.00	1.07	1.82	0.93	0.18	1.00	1.00	1.06	1.71	0.92	0.18
II	5	10	15	0	10	0.95	0.45	0.96	0.63	0.84	−0.58	0.96	0.53	0.90	0.62	0.85	−0.54
III	5	5	20	10	0	0.95	0.52	0.96	0.63	0.89	−0.26	0.95	0.48	0.94	0.49	0.83	−0.46
IV	10	5	5	10	−10	1.03	1.35	1.11	2.76	1.00	0.97	1.05	1.44	1.16	2.55	1.07	1.34

1. On the assumption that net household incomes received from the government change at the same rate as the collective consumption ($\Delta W_g = I_s W_g$).

2. On the following assumptions: the increase of agricultural incomes and incomes from the "other sectors" follows by one-half the increase in output ($\Delta W_1 = 0.5 \Delta W_1^*$, $\Delta W_4 = 0.5 \Delta W_4^*$), the increase of net incomes from the government follows by one-half the increase in collective consumption ($\Delta W_g = 0.5 I_s W_g$).

3. On the following assumptions: the increase of agricultural incomes from the "other sectors" follows by one and a half the increase in output ($\Delta W_1 = 1.5 \Delta W_1^*, \Delta W_4 = 1.5 \Delta W_4^*$), the increase of net incomes from the government follows by one and a half the increase in collective consumption ($\Delta W_g = 1.5 I_s W_g$).

NOTE. — All symbols used in the table are explained in the Technical Note appearing in Appendix 8.I.

Legend: I_c = Private consumption.
I_s = Collective consumption.
I_g = Investment.
I_f = Net foreign trade balance.

TABLE 8.28

Employment structure in the Soviet Union and eastern European countries

Country and year		Total employment	Agriculture and forestry	*of which:* State sector	Mining and manufacturing	Construction	Transport and communications	Trade and other productive service sectors	Non-productive service activities
		Percentage distribution of employment by branches							
		Millions	per cent	per cent	per cent	per cent	per cent	per cent	per cent
lgaria [a][b]	1952 . .	3.9	73	4	11	4	2	3	7
	1956 . .	4.2	71	4	13	3	3	3	7
	1960 . .	3.9	56	8	22	5	4	4	9
	1964 . .	3.8	47	12	25	7	5	5	11
echoslovakia [a]	1950 . .	5.6	39	14	30	6	5	9	11
	1955 . .	6.0	34	20	33	7	6	8	12
	1960 . .	6.1	26	24	37	8	6	8	15
	1964 . .	6.4	22	31	38	8	6	9	17
stern Germany [c][d]	1952 . .	7.3	23	11	39	6	7	11	14
	1955 . .	7.8	22	16	40	6	7	11	14
	1960 . .	7.7	18	17	41	6	7	11	17
	1964 . .	7.7	17	16	41	6	7	11	18
		7.7		16					
ngary [e][f]	1950 . .	4.2	51	5	20	3	4	5	17
	1955 . .	4.5	43	16	25	5	5	6	17
	1960 . .	4.8	40	17	27	6	6	6	15
	1964 . .	4.9	32	20	31	6	6	8	17
	1965 . .	4.9	31	21	32	6	6		18
land [e][g][h]	1950 . .	12.4	57	..	19	4	4	16	
	1955 . .	..	53			32		15	
	1960 . .	13.9	47	..	23	6	5	19	
	1964 . .	..	44	..	23	6	5	22	
mania [e][g]	1950 . .	8.3	74	4	12	2	1	3	8
	1955 . .	9.3	70	5	13	4	2	3	8
	1960 . .	8.8	65	6	15	5	2	4	9
	1964 . .	8.9	58	9	18	7	2	4	11
viet Union [a][g]	1950 . .	66.5	46	12	22	4	7	7	14
	1955 . .	73.2	41	21	25	4	8	7	15
	1960 . .	84.3	38	24	25	6	8	8	15
	1964 . .	92.5	31	31	28	6	8	9	18

Source: National Statistical Yearbooks. For Poland, see *Praca i zabezpieczenie społeczne*, No. 6, 1965.

early average.

artly estimated on the basis of information in the Statistical Yearbook 1965, p. 70-71.

early census data.

ining and manufacturing includes apprentices for the period 1952 to 1955.

[e] Yearly census data (1 January).

[f] Mining and manufacturing includes apprentices.

[g] Construction excludes building workers in state and co-operative farms.

[h] Agriculture covers the national economy; all other sectors only the socialist economy.

though the examples are based on actual figures, they ould be considered as entirely illustrative, having no nnexion with the economic policies actually pursued in ese countries; their purpose is only to explain the macroonomic interrelationships, which constitute the general amework for any specific variant of income policy.

The three chosen income policy variants are represented corresponding columns in Table 8.28. Variant A (coefficients b and b′) assumes parallel change in incomes of all productive sectors, with net incomes from the government growing *pari passu* with collective consumption.[133] This variant of income policy might be applied if sectoral earnings differentials are considered as satisfactory, and there is no need for new income incentives to bring about a shift in the allocation of the labour force. The second type of policy (variant B, coefficients $b_{2,3}$ and $b'_{2,3}$) implies, *a priori*, a decrease in the share of wage costs in the value of output of agriculture and "other sectors", and a slow increase of incomes in the non-productive sector. In consequence, this variant offers greater scope for raising earnings in the industrial sector. This policy variant has been applied in a number of the countries studied, in, for instance, periods of rapid industrialization, when the transfer of labour from agriculture to industry was actively promoted. The third policy type (variant C) is based on an entirely opposite approach, favouring all other sectors at the expense of industry. If the variant B were applied for a prolonged period, the wage differentials between industry and other sectors might become too wide and special policy measures (e.g. upward adjustments in agricultural delivery prices, autonomous salary increases in non-productive service activities, etc.) would have to be introduced to narrow them.

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[133] For a more exact definition of the variants, see the corresponding footnotes of Table 8.27.

The effect of such different variants of income policy on the industrial sector may vary considerably, depending on the given strategy of resource allocation. Four typical alternatives (I-IV) are presented in the rows of Table 8.27. Alternative I is characterized by unchanged structure of final demand, when the coefficients b and b′ obviously have to equal unity in the case of income policy variant A. The second and third alternatives represent shifts in allocation towards increased investment and collective consumption. The net foreign trade balance of the two reference countries being of opposite signs in the base period (negative in Poland in 1957, and positive in Bulgaria in 1960), the alternatives have been established accordingly. Under alternative II, foreign trade contributed a little to the implementation of the investment programme; under alternative III, it renders the burden on the economy rather heavier. The computed values of the coefficient b show that a shift in resource allocation in favour of investments does not allow incomes to grow in parallel with output, a decrease in the share of wage costs in the value of output being unavoidable. Incomes in industry can be allowed to follow the growth of the industrial output more or less *pari passu* only at the expense of incomes in other sectors (variant B, $b_{2,3}$). In such a situation it is practically impossible, however, to improve non-industrial incomes *ex post*, since this would lead to an absolute fall in industrial wages and salaries (negative values of $b'_{2,3}$ for the variant C both on the basis of Polish and Bulgarian data).[134] The fourth alternative represents a consumption oriented policy with some support from the foreign trade sector. Incomes can be allowed to grow considerably faster than output; even a significant improvement in non-industrial incomes does not entail a reduction of earnings in industry (variant C, $b_{2,3}$).

A great number of similar alternatives could be co
puted; the four cases referred to would seem sufficie
however, to illustrate the margins for income pol
decisions left to the planners under the constraints o
given general development strategy, determining
amount of resources to be channelled to the governme
sector.

Another possible approach to the macro-econon
aspects of the income policy problem would be to anal
the "multiplier" effect of the increase of particular fi
demand components on private consumption in order
ascertain the possibilities for achieving financial balar
in the household sector. On the basis of the same da
of wages paid on final demand components which ha
been used in the previous calculation, the following rati
between the autonomous change in particular fi
demand components (other than private consumptio
and the necessary change in supplies to private consum
tion in order to maintain balance on the consumer mar
can be established for the Polish economy in 1957 and t
Bulgarian economy in 1960:

The multiplier effect of a change in a final demand compon by one unit:

	Poland 1957 (billion zlotys)	*Bulgaria 196 (billion leva*
Collective consumption (m_s) . . .	1.27	1.07
Investment (m_v)	1.39	1.24
Foreign trade balance (m_f)	1.46	1.38

The multiplier effect of a change in final demand compon by one per cent:

	Poland 1957	*Bulgaria 196*
	(Percentages) [a]	
Collective consumption	0.081	0.112
Investment	0.638	0.733
Foreign trade balance	0.113	0.106

[a] The percentages do not sum to 100; the differences (i.e. 0.168 for Poland
0.049 for Bulgaria) represent the autonomous rates of growth in incomes f
non-productive service activities.

The results indicate[135] that, on the basis of the Poli
situation in 1957, an autonomous increase in investme
of 1 billion zlotys would yield an increase in priva
consumption of 1.39 billion (incomes growing at t
same rate as productivity); or an increase of 1 per ce
in investment would be accompanied by an (appro
mately) 0.6 per cent increase in private consumptio
whereas the same change in net foreign trade would gi
rise to a fluctuation of only 0.1 per cent (negative
positive).

As explained in the technical note, an alternative fo
mulation of the conditions for equilibrium is that t
sum of wages contained in an autonomous increment o
final demand component (other than private consum
tion) should be equal to the sum of profits contained in t
increase in private consumption.[136] It follows th

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[134] In Poland, industrial production will increase by 10.6 per cent under alternative III, variant C. Assuming no rise in employment, the change in average wages will be equal to (1+0.106). 0.89=0.98, i.e. average wages will decline by 2 per cent.

[135] The simplifying assumptions are the same as in the previ
exercise; only the assumption of unchanged share of wage costs
the value of output must be added.

[136] In Poland in 1957, the wage cost per unit of investments and
profit cost per unit of private consumption were 0.591 and 0.4
respectively. The former figure is equal to the product of the la
figure and the investment multiplier of 1.39 shown in the text ta

uilibrium may be maintained by increasing the profit st per unit of consumption while keeping the corres- nding wage cost constant. The price increase resulting om this course of action appears directly from the cond half of the text table above. Thus, in Bulgaria, e effect on equilibrium of an autonomous increase in vestment of 1 per cent would be offset by an increase 0.73 per cent in average consumer-prices.

With the aid of the multiplier, a given set of changes final demand components may be checked for internal nsistency. Taking alternative III in Table 8.27 as an ample, it follows that an increase in collective con- mption of 5 per cent would bring about an increase in ivate consumption of (approximately) 0.405 per cent × 0.081); an expansion of investment by 20 per cent ould entail a further increase of 12.76 per cent 0 × 0.638); a 10 per cent rise in the passive foreign ade balance brings some alleviation in the investment irden to the economy (by 1.13 per cent); however, the ange in incomes from the government (by 0.84 per cent × 0.168)) has also to be taken into consideration. ie total increase in private consumption (with incomes the non-productive service activities growing *pari ssu* with collective consumption) would thus amount 12.875 per cent, while the planned or permissible rate only 5 per cent. Implementation of the given set would quire a considerable reduction in the share of wages the value of output, i.e. the ratio between the growth of oductivity and the growth of average wages would ive to be below one. (As the computation in Table 8.27 iows, the marginal ratio between wage and output owth ought to be 0.52.) As just indicated, another lution would be to raise the tax element in consumers' ices.

In practice, planners would not, of course, operate ith such simplified assumptions as those used in the ustrative exercise above; but in a more elaborate ntext, investigations of similar quantitative relation- ips affecting income policy strategies may indicate nits to manœuvre and various possibilities of influenc- g the basic parameters.

The application of the productivity rule in income etermination gives rise to a number of problems in an building as well as in plan implementation. In eneral, the planners are confronted with the choice of a ilue of the coefficient b for agriculture, industry and the her productive sectors, taking into account expected oductivity developments and the planned increase in t personal income from the government; they have so to set targets for adjustments to absolute as well as lative earnings at different levels of the economy.

Within the macro-economic framework of resource location, as described above, the systems and methods r distribution of labour income in the various sectors id branches of the economy, and to the various groups income earners, are very important in the regulation incomes in relation to productivity. On the whole, e system for farm income distribution and the basic age and salary systems for workers and employees ovides the elements necessary for central control, but ie great reliance on incentive payments has introduced dynamic factor which has to be constantly watched.

Depending on the extent to which and the ways by which individual earnings are linked to production and productivity results, four broad sectoral groups of earners can be distinguished: (i) agriculture, outside the state sector; (ii) industry and construction; (iii) productive service activities; and (iv) non-productive activities.

In the agricultural sector, whether it is collectively or privately managed, money incomes — which are the only relevant ones for macro-economic financial balancing — are allowed to develop broadly in relation to market output, state prices being the main regulating mechanism for products and means of production.

The incomes of workers and employees in industry and construction are rather strongly influenced by the link of earnings to production via piece-rates (for individual workers and/or for particular teams of workers) and various premia payments to workers and employees. The average earnings of the groups as a whole will tend to rise "automatically" with productivity, even if basic wages remain unchanged.

The earnings of workers and employees in productive services, such as trade, transport and communications, are less influenced by the effects of incentive schemes, since piece-working is more difficult to apply in such activities; the organizational structure in these sectors is, however, based on profit-making enterprises, and certain links with performance are established by means of premia payments to individuals and production units.

In the non-productive services, the earnings of workers and employees are almost exclusively determined by basic wages and salaries, it being difficult to link wages to productivity in a meaningful way. The activities concerned are in general carried out by non-profit-making enterprises and institutions, and premia can only with difficulty be granted on the basis of performance.[137]

In the movement of wages and salaries, there are of course other factors at work than the "automatic" links between earnings and performance — such as length of service and transfers to higher grades on the basis of proven ability or acquisition of new skill, but they affect all wage- and salary-earners equally. In general, therefore, it seems correct to say that, in the absence of any change in basic wage and salary rates, average earnings of income groups in the productive sectors of industry and construction tend to rise faster than those of the other groups, and periodically corrective central measures therefore become necessary.

The different types of price policy which may be pursued in connexion with macro-economic adjustments in national income distribution significantly affect the income differentials between various sectoral groups of income earners. When constant prices are applied and real wages increase in parallel to nominal wages, differentials will tend to widen and the need may arise for

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[137] Both difficulties are not absolute; modern methods of systems analysis, cost accounting and budgeting provide a basis for assessing individual or group activity as well as overall performance. In certain countries — eastern Germany, for instance — some non-productive service enterprises have in recent years been transferred to autonomous economic accounting (*khozraschet*) on an experimental basis.

TABLE 8.29

Relative levels of wage (A) and productivity (B) growth and their ratio (C) by major industrial branches in five eastern European countries

Branch	Bulgaria [a]						Czechoslovakia [b]			Eastern Germany [c]			Hungary [d]						Poland [e]		
	1950-1964			1955-1964			1955-1964			1955-1964			1950-1964			1955-1964			1955-1964		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Energy	0.98	1.88	0.52	1.05	1.69	0.62	1.01	1.21	0.83	0.97	0.90	1.08	0.93	0.94	0.99	1.01	1.02	0.99	1.13	1.24	0.91
Fuel	0.97	1.36	0.71	1.04	1.43	0.73	1.03	0.94	1.09	0.98	0.69	1.42	1.30	0.70	1.86	1.10	0.85	1.29	1.02	0.69	1.48
Ferrous metallurgy .	0.88	1.64	0.54	0.92	1.06	0.87	0.97	0.91	1.07	0.92	0.71	1.30	0.91	1.07	0.85	0.94	1.01	0.93	0.99	0.98	1.01
Non-ferrous metallurgy .	1.02	0.60	1.70	0.96	0.96	1.00	0.96	0.90	1.07										0.95	0.90	1.06
Engineering . .	0.99	2.16	0.46	0.98	1.46	0.67	0.99	1.12	0.88	0.93 [g]	1.09 [g]	0.85 [g]	0.90	1.26	0.71	0.96	1.19	0.81	0.96*	..	..
Chemicals and rubber . . .	0.93	1.59	0.58	0.93	1.66	0.56	0.98	1.27	0.77	1.00	1.03	0.97	0.90	1.53	0.59	1.00	1.17	0.85	0.99 [f]	1.52 [f]	0.65 [f]
Building materials . .	0.95	1.32	0.72	0.99	1.05	0.94	0.99	1.35	0.73	1.04	1.13	0.92	1.09	1.40	0.78	1.03	1.19	0.87	1.00	1.15	0.87
Glass and ceramics . .	0.91	1.75	0.52	0.99	1.68	0.59	0.97	0.94	1.03	1.04	0.98	1.06							0.98	1.15	0.85
Textiles . . .	1.04	0.98	1.06	1.01	0.80	1.26	1.01	0.86	1.17	1.06	0.96	1.10	0.96	0.88	1.09	1.03	0.84	1.23	1.08	0.89	1.21
Clothing . . .	0.97	1.72	0.56	1.01	0.93	1.09	1.04	0.98	1.06	1.10	0.95	1.16	1.00	0.70	1.43	0.98	0.86	1.40	1.02	0.99	1.03
Food processing. .	1.08	0.67	1.61	1.04	0.80	1.30	1.00	0.91	1.10	1.05	0.80	1.31	1.02	0.87	1.17	1.07	0.93	1.15	1.01	0.78	1.29

Sources: National statistics.

[a] State industry, workers and employees.

[b] Total industry, manual workers.

[c] Socialist industry, production workers.

[d] State industry, workers.

[e] Socialist industry, workers and employees.

[f] Excluding rubber industry.

[g] Heavy engineering.

Legend: A = Ratio of relative wage growth in individual branches to average wage growth in total industry.
B = Ratio of relative productivity growth in individual branches to average productivity growth in total industry.
C = Ratio of relative wage growth to relative productivity growth in individual branches (A: B).

djustments of income levels in the productive and nonroductive service sectors, where the links between earngs and productivity developments are only tenuous or on-existent. If changes in the resource allocation pattern ke place, while wage costs per unit of output remain ore or less stable — the industrial wage system barring ompensatory adjustments in the coefficient b of the roductive sectors — it may be necessary to increase the x element in the prices of consumers' goods and ervices; this may have an unfavourable influence on e incomes of those sectoral groups which have more or ss stable earnings. On the contrary, if the general level f earnings (or wage costs) is kept below the permissible alue of the coefficient b in the production sectors, room ay be left for a distribution of productivity gains in the orm of consumers' price reductions at the expense of e tax element, a situation which will particularly benefit e low-income groups in the industrial sectors, and the orkers and employees in productive and non-productive ervice activities, and tend to narrow differentials.

Changes in the importance of the four sectoral groups f wage- and salary-earners, as mentioned above, which ave taken place during the period under review, can be oughly evaluated from the data in Table 8.28.[138]

It is obvious that the conditions of the industrial groups ave a much stronger bearing on total incomes in eastern ermany and Czechoslovakia, for instance, than in the till predominantly agricultural economies of Rumania, ulgaria and Poland, although the structural shifts in e latter countries have been considerable in the last fteen years. In most countries, except Hungary, the share f employment in non-productive services has been increasing, and now constitutes about 18 per cent of the otal in the more industrialized countries.

Under a system of direct planning, it is not possible for e policy makers to consider only the sectors and the ncome groups distinguished so far in this section; they ust also face the problem of determining the coefficient at the level of branches and enterprises. Available data n the movements of the relevant indices in eleven selected ranches of four eastern European countries have been tilized in Table 8.29, to show how the value of the oefficient b in these branches has deviated from the value f the coefficient for industry as a whole. A ratio higher han 1 in column C of the table indicates that in the hosen period wage costs have risen more than average relation to productivity, i.e. it reflects the extent to hich wage- and salary-earners in the particular branch ave participated in the redistribution of productivity ains within industry. In all four countries this redistriution has been in favour of the low-paid consumer-goods ndustries, such as textiles, clothing and food processing. most countries the situation has been the same in those ranches where working conditions are arduous, such fuel and metallurgy.

Available information does not permit a comprehensive explanation of the actual changes in the value of the coefficient b by major productive sectors during the period under review in the present study. The graphical representations (in Chart 8.7) of trends in average real wages, average nominal wages and productivity in the industrial sectors of six eastern European countries do provide some elements, however, which make possible discussion of connexions between wage developments in industry and shifts in resource allocation and policy attitudes towards income groups other than industrial workers and employees, as they have been singled out in the input-output exercise. The relationship over time between average real wages and productivity may be considered as representing the changes in the coefficient b induced by alterations in the shares of final demand components and in policies with respect to income earners in agriculture, non-industrial productive sectors and non-productive service activities. The same relationship between nominal wages and real wages may be taken to reflect the price policies pursued to channel financial resources to the government sector. It should be recalled, however, that price policy measures also affect the relative position of the various groups of income earners, and rising prices may sometimes account for inability to control the industrial wage bill rather than for such factors as changes in resource allocation patterns or improvement in the relative position of collective farmers.

It follows that the relationships deriving from the data shown in Chart 8.7 are determined, in reality, by a multitude of factors, frequently acting in opposite directions. All due reservations made, an attempt has nevertheless been made to interpret some of the salient features in the graphs against the background of the general economic developments described in Chapter 7. A country-by-country approach has been chosen as the more appropriate, taking into account the particularities of national economic structures and policy attitudes; other things being equal, the policies adopted in respect of non-industrial income earners have, for instance, a more significant impact on the value of the global coefficient b in countries where — and in periods when — the industrial sector is comparatively small.

The situation in Bulgaria, as shown in the graph, is characterized by a considerably faster growth in average real wages than in productivity in the years from 1952 to 1955. During this period, the share of private consumption in national income remained approximately unchanged, while the policy of rapidly reducing consumers' prices — showing up as an increasing gap between nominal and real wages — implied also a relative improvement in the income conditions of the comparatively small group of non-industrial wage- and salary-earners. These developments can be explained largely by the enforced restrictions on the growth of personal incomes in the agricultural sector. From 1957 to 1959, average real wages rose more slowly than productivity, reflecting mainly the sharp increase in the investment ratio which followed as a consequence of the policy aiming at accelerated economic growth. By contrast, a similar development of real wages and productivity during the period 1961-1964 was primarily the result of an improvement in the

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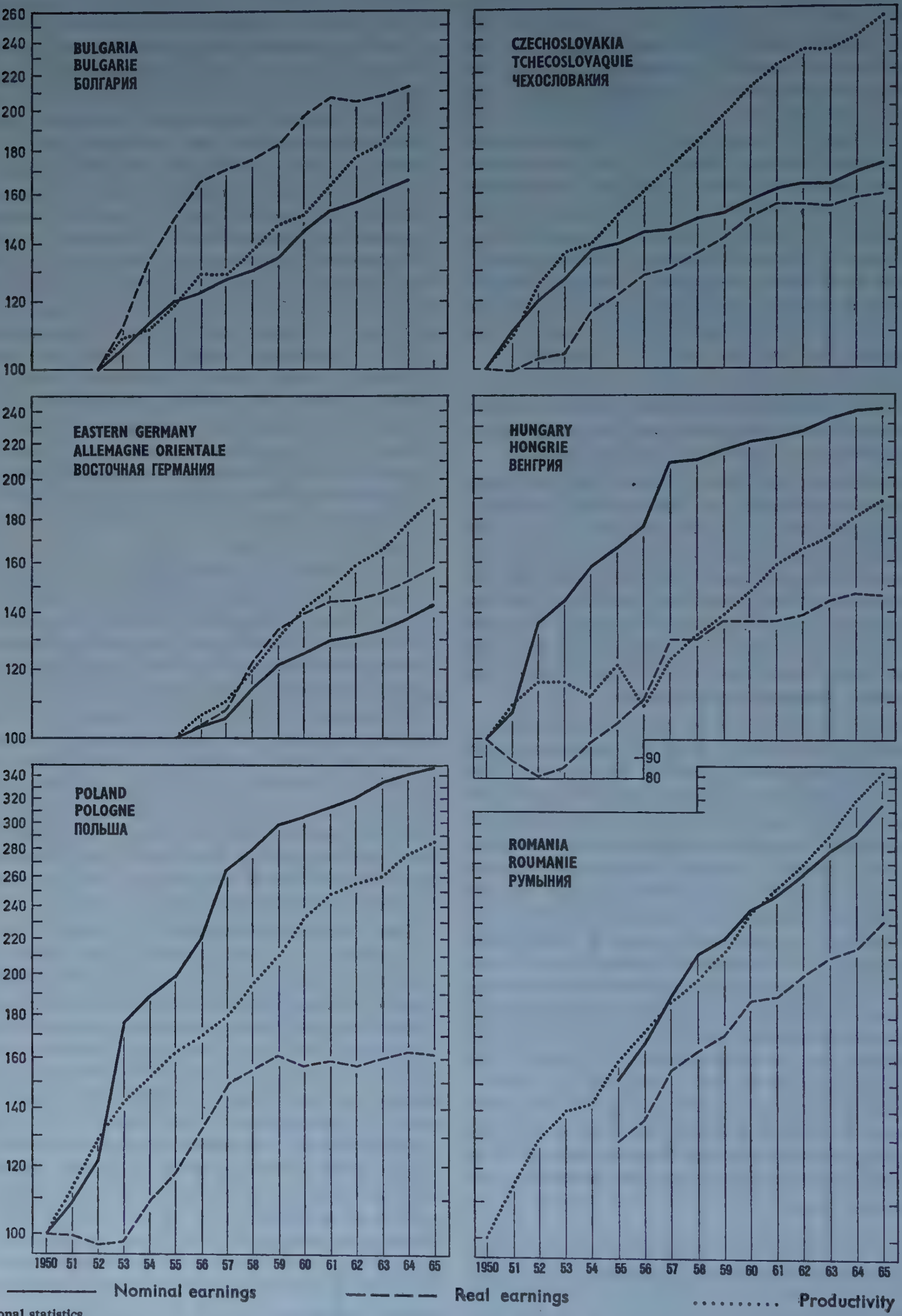
[138] The data in Table 8.28 should be considered only as an illusation of orders of magnitude of sectoral employment in the various ountries. The methodological approach to the sector breakdown aries somewhat from one country to another; even in individual ountries definitions have partly changed over time; and in most stances a statistically comparable assessment of employment in the gricultural sector presents great difficulties.

CHART 8.7

Relative growth of nominal earnings, real earnings and productivity in the industrial sectors of six eastern European countries

Index numbers [a]



Sources: National statistics.

NOTE. — Data refer to total industry in Czechoslovakia, eastern Germany and Rumania, and to the socialist sector in Bulgaria, Hungary and Poland

[a] 1950 = 100, except in Bulgaria (1952 = 100) and in eastern Germany (1955 = 100).

ative position of the farmers, which, in turn, showed
in slightly increasing prices.

The most striking feature of the graph describing
velopments in Poland is that virtually the whole
crease in average real wages of industrial workers and
ployees took place during the consumption phase of
54-1958. In the first investment phase, average nominal
ges rose significantly faster than productivity, but this
velopment was more than offset by price adjustments.
the second investment phase, which set in after 1958,
erage nominal wages tended, on the contrary, to
crease at a slower pace than productivity, i.e. wage
sts per unit of output fell somewhat. Nevertheless,
ices of consumers' goods and services had to be cor-
cted in the course of that period, too, in order to
annel the necessary financial resources to the socialist
ctor. Except for the years of the consumption phase,
growth of real wages has thus been lagging signi-
antly behind that of productivity. In 1965 the two
evant indices stood at 162 and 286, respectively.

In the early investment phase in Czechoslovakia,
minal wages were allowed to follow productivity
velopments, while real wages rose very slowly, partly
e to price increases in the non-rationed retail trade.
in Poland, a consumption phase set in about 1954,
t in Czechoslovakia it had been preceded by a monetary
form and a quite different price policy was followed.
eclining prices led to a relatively rapid increase in real
ges, while nominal wages were checked by more
icient wage-fund control than in Poland. The beginning
a new investment phase in 1958, combined with a
licy tending to improve the incomes of the farmers,
ecked the development of real, as well as of nominal,
ges.

The main feature of developments in eastern Germany
the more or less parallel development of real wages and
oductivity up to 1960, and divergent movements in the
o variables thereafter. This turning point does not
flect any major shift in resource allocation, however —
private consumption ratio having shown a de-
ning tendency since 1955. The explanation is partly
be sought, therefore, in changes in the savings ratio,[139]
nich increased up to 1960, reflecting suppressed in-
tion, and thereafter declined, at the same time as
ge-fund control in the last five years improved con-
lerably.

The Hungarian picture is characterized by a serious
k of control over nominal wages up to 1957; in the
ars from 1952 prices were kept more or less stable and
erage real wages were allowed to follow the rapid
owth in nominal earnings, which contrasted sharply
th the stagnation in productivity. Since the wage reform of 1957 the gap between productivity and wage developments has been widening, and during the post-1958 period the resource allocation pattern has been fairly clear, with a diminishing ratio of private consumption to national product.

Developments in Rumania would mainly tend to show that wages can be allowed to follow productivity growth relatively closely, as long as the industrial sector is relatively small. Prices increased slowly: by some 10 per cent in the period from 1955 to 1965. It was around 1960 that the shift in resource allocation towards investment was first reflected in somewhat divergent movements in productivity and wages.

During the period under review, significant changes have taken place in the general economic situation of the centrally planned economies in the eastern European region. The growth strategy followed since the early 1950s aimed above all at rapid industrialization on the basis of enlarged employment and fixed capital assets. In consequence, the share of personal consumption in the fast expanding national income was bound to fall, and wage costs had to be kept relatively low, especially in economic sectors where productivity developed slowly. The income distribution systems in general permitted average nominal wages in industry to rise faster than earnings in agriculture and non-industrial and non-productive activities; this tendency was favoured by the great reliance placed on piece-working to promote individual efforts. Owing to uncontrolled growth, nominal incomes often tended to exceed the expansion of consumers' supplies, which lagged significantly behind the rise in national income; in the early period, disequilibrium was frequent, and corrections had often to be made through upward adjustments of prices or administrative measures.

Towards the end of the last decade, and in recent years, the setting of the growth problem fundamentally changed in some of the more industrialized countries, especially in eastern Germany and Czechoslovakia, and is gradually altering everywhere. Reliance cannot be placed to the same extent as in the past on mobilization of manpower resources in agriculture and urban households to promote growth of national income; although the expansion of employment will remain a problem in some countries, labour-saving investments are assuming increasing importance and more attention is given to technical progress as a vehicle of economic growth. Greater emphasis is thus being laid on the quality of the labour force and, consequently, on differentials according to skill. Efficient control over wage-cost developments in relation to actual economic development is becoming a major concern; and at a higher level of technique incentive payments are more conveniently linked to the overall results of the enterprise, than to individual effort, as expressed in piece-working results. Private consumption tends to be considered as a factor stimulating economic growth, and increased attention is given to avoidance of global and partial disequilibrium on the consumers' market. In this context agricultural supplies are of importance and income incentives in the farm sector are generally being enhanced.

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[139] The increment (in billion DM) in the holdings of cash and
posits of the population amounted to 1.7 in 1955, reached a peak
4.4 in 1960, declined to 2.2 in 1962, and remained at approximately
t level in the following year (see *Wissenschaftliche Zeitschrift*
Hochschule für Ökonomie, Sondernummer 1965, p. 130). Accord-
to rough estimates, the ratio of savings to money incomes
ounted to 4 per cent of disposable money income in 1955,
er cent in 1960 and 3.5 per cent in 1963.

Such developments, in conjunction with the general tendency to enlarge enterprises' autonomy, have in certain respects rendered wage and income policy problems more complicated than in the past. Attention has still to be paid to the relationship between the coefficient b in productive activities and changes in resource allocation, but the value of b will only very generally or partly be determined by directives from the planners, and greater use may have to be made of economic, financial or fiscal measures.[140] Moreover, the tax and transfer component of the item "net personal income from the governmen is likely to become increasingly important. The addition complications mentioned above may prove to be mo theoretical than real, however, inasmuch as the dire wage control practised in the past — and still maintain in many countries — often fell short of its major obje tives.

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[140] See the *Economic Survey of Europe in 1965*, Part 1, Cha ter I, p. 64.

Appendix 8.I

TECHNICAL NOTE ON THE APPLICATION OF THE INPUT-OUTPUT ANALYSIS

In section 8.7 of Chapter 8 there are data and calculations based on input-output tables for Poland (1957) and Bulgaria (1960).[1] order not to overload the main text with explanations of formulae, these have been defined below — the figures of the Polish input-tput table serving as an illustrative example.

TABLE 8.30

Aggregated Polish input-output table for 1957[a]

(in billion zlotys)

Sector	1 Agriculture	2 Consumer-goods industry	3 Investment-goods industry	4 Other material production sectors	5 Private consumption	6 Collective consumption	7 Investment	8 Foreign trade and other	9 Total final demand	10 Total gross output
Agriculture . . .	71.2	58.8	0.9	0.9	47.9	—	5.9	— 5.5	48.3	180.1
Consumer-goods industry	10.4	135.0	34.5	5.0	138.7	8.2	12.9	— 6.9	152.9	337.8
Investment-goods industry	3.1	5.8	18.8	1.7	7.3	4.1	82.2	— 7.9	85.7	115.1
Other material production sectors	2.2	13.2	4.0	4.1	26.5	1.9	0.1	3.4	31.9	55.4
Personal incomes .	75.2	47.0	36.5	24.7	— 220.4	37.0	—	—		
Other items of value added . .	18.0	78.0	20.4	19.0	—	— 51.2	— 101.1	+ 16.9		
Gross inputs . .	180.1	337.8	115.1	55.4	—	—	—	—		688.4

Owing to lack of information, taxes paid by households and household savings (T_k), incomes from the government and credits to households (W_g) were put together and calculated as one item balancing the relations between household incomes, private consumption, collective consumption and the outlays of the government. This explains how the figures 37.0 and 51.2 in column 6 have been obtained, since they do not appear in the original source. The same procedure has been applied to the input-output table for Bulgaria.

The aggregation of data

In order to stress the most important quantitative relations, and for ease of reading, both tables have been transformed into small ur-sector balances according to the following framework.[2]

		Distribution of output to sector				Final demand				Total gross output
		1	2	3	4	Private consumption	Collective consumption	Investment	Foreign trade	
The inputs from sectors	1	X_{11}	X_{12}	X_{13}	X_{14}	C_1	S_1	V_1	F_1	X_1
	2	X_{21}	X_{22}	X_{23}	X_{24}	C_2	S_2	V_2	F_2	X_2
	3	X_{31}	X_{32}	X_{33}	X_{34}	C_3	S_3	V_3	F_3	X_3
	4	X_{41}	X_{42}	X_{43}	X_{44}	C_4	S_4	V_4	F_4	X_4
Personal incomes . .		W_1	W_2	W_3	W_4	$-W$	W_g	—	—	—
Other items of value added		T_1	T_2	T_3	T_4	T_k	$-O_g$	$-O_v$	$-O_f$	—
Total inputs		X_1	X_2	X_3	X_4	—	—	—	—	X

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[1] See *Rocznik statystyczny 1961*, pp. 62, 63. The Bulgarian input-utput data were obtained from a direct communication from the entral Statistical Office in Sofia.

[2] The rule for aggregation of the Polish input-output table is as follows (the aggregation of the Bulgarian table following similar lines): *Agriculture* = 17. Agriculture, 18. Forestry, 2. *Consumer-*

The following symbols are introduced:

X = Total gross output
X_i = Gross output of sector i ($i = 1, 2, 3, 4$)
X_j = Gross inputs into sector j ($j = 1, 2, 3, 4$)
X_{ij} = Material flows from sector i to sector j
Y_i = Final demand on output of sector i
Y = Total final demand
C_i = Private consumption of the output of sector i
C = Total private consumption
S_i = Collective consumption of the output of sector i
S = Total collective consumption
V_i = Investment of the output of sector i
V = Total investment
F_i = Foreign-trade balance of the output of the sector i
F = Total foreign-trade balance
W_j = Personal income (wages and salaries) from sector j ($j = 1, 2, 3, 4$)
W_g = Personal incomes from the government
W = Total expenditure of households
T_j = Other items of value added (mainly depreciation, taxes and profits) in sector j ($j = 1, 2, 3, 4$)
T_k = Taxes paid by households and household net savings
O_a = Expenditure of the government (on collective consumption O_c, on investment O_v, on foreign-trade balance O_f).

The four productive sectors which remain after aggregation are:

1. agriculture
2. consumer-goods industry
3. investment-goods industry
4. other productive sectors.

The non-productive activities are treated in the final demand section of the balance. The deliveries from the productive sector to non-productive activities are treated as direct deliveries to final users (government or households). The wage element of non-productive services is partly absorbed by households and partly treated as W_g. The profit part is in principle a negative item under W_g[3].

It is obvious that the aggregated table is based on a very simplifie approach to some important economic relations. Therefore, it assumed that equilibrium obtains between the incomes of hous holds and the volume of private consumption, and also anoth equilibrium between total taxes, profits, etc., and between the volum of collective consumption, investment and net foreign-paymen balance[4] (obviously, all investment is financed by the government

The conventional[5] input-output procedure was then applie The input coefficients:

$$a_{ij} = \frac{X_{ij}}{X_j} \quad (i, j = 1, \dots 4)$$

and the primary input (wage cost[6] and other value added item coefficients:

$$a_{wj} = \frac{W_j}{X_j} \quad (j = 1, \dots 4) \qquad (2)$$

$$a_{tj} = \frac{T_j}{X_j} \quad (j = 1, \dots 4) \qquad (2)$$

were calculated and arranged into an input coefficient matrix which was deducted from a unit matrix **E**:

$$(\mathbf{E} - \mathbf{A}) = \begin{bmatrix} 1 - a_{11} & -a_{12} & -a_{13} & -a_{14} \\ -a_{21} & 1 - a_{22} & -a_{23} & -a_{24} \\ -a_{31} & -a_{32} & 1 - a_{33} & -a_{34} \\ -a_{41} & -a_{42} & -a_{43} & 1 - a_{44} \end{bmatrix}$$

and inverted:

$$(\mathbf{E} - \mathbf{A})^{-1} = \begin{bmatrix} r_{11} & r_{12} & r_{13} & r_{14} \\ r_{21} & r_{22} & r_{23} & r_{24} \\ r_{31} & r_{32} & r_{33} & r_{34} \\ r_{41} & r_{42} & r_{43} & r_{44} \end{bmatrix}$$

Each coefficient r_{ij} (the full cost coefficients) represents th amount of output sector "i" required directly and indirectly satisfy one unit of final demand for the output of the sector "j

The matrix of the primary input coefficient:

$$\mathbf{P} = \begin{bmatrix} a_{w1} & a_{w2} & a_{w3} & a_{w4} \\ a_{t1} & a_{t2} & a_{t3} & a_{t4} \end{bmatrix}$$

was multiplied by the inverse input coefficient matrix in order t obtain a matrix of the full primary cost coefficients (i.e. full wag cost coefficients r_{wj} and full "other value added" cost coefficien r_{tj}):

$$\mathbf{P}(\mathbf{E} - \mathbf{A})^{-1} = \begin{bmatrix} r_{w1} & r_{w2} & r_{w3} & r_{w4} \\ r_{t1} & r_{t2} & r_{t3} & r_{t4} \end{bmatrix}$$

The sum:

$$r_{wi} + r_{tj} = 1 \quad (j = 1, 2, \dots 4)$$

In order to obtain a deeper insight into the full wage cost coef cients r_{wj} the inverse input coefficients matrix was multiplied by diagonal matrix $[\hat{a}_{wj}]$ (its elements are the wage input coefficie a_{wj}). The product is a square matrix of elements ${}_ir_{wj}$:

$$\mathbf{R}_w = [\hat{a}_{wj}](\mathbf{E} - \mathbf{A})^{-1} = \begin{bmatrix} a_{w1} & 0 & 0 & 0 \\ 0 & a_{w2} & 0 & 0 \\ 0 & 0 & a_{w3} & 0 \\ 0 & 0 & 0 & a_{w4} \end{bmatrix} \begin{bmatrix} r_{11} & r_{12} & r_{13} & r_{14} \\ r_{21} & r_{22} & r_{23} & r_{24} \\ r_{31} & r_{32} & r_{33} & r_{34} \\ r_{41} & r_{42} & r_{43} & r_{44} \end{bmatrix}$$

$$= \begin{bmatrix} {}_1r_{w1} & {}_1r_{w2} & {}_1r_{w3} & {}_1r_{w4} \\ {}_2r_{w1} & {}_2r_{w2} & {}_2r_{w3} & {}_2r_{w4} \\ {}_3r_{w1} & {}_3r_{w2} & {}_3r_{w3} & {}_3r_{w4} \\ {}_4r_{w1} & {}_4r_{w2} & {}_4r_{w3} & {}_4r_{w4} \end{bmatrix}$$

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goods industry = 2. Energy, 3. Fuels, coals and coke, 4. Steel and iron, 5. Other metals, 7. Chemicals, 8. Construction materials, 9. Timber, 10. Paper and pulp, 11. Textiles, 12. Clothing, 13. Shoes, furs, 14. Foodstuffs, 15. Other industrial branches. 3. *Investment-goods industry* = 6. Engineering, 16. Construction. 4. *Other material-productive sector* = 19. Transport and communications, 20. Trade, 21. Other material production, 5. *Personal incomes* = 28. Wage-fund, 30. Incomes of private activities, 31. Incomes of co-operatives. 6. *Other items of value-added* = 23. Unallocated items, 25. Depreciation, 29. Social insurance, 32. Profits, including budgetary differences, 33. Taxes, 34. Other non-material costs. 5. *Private consumption* = Personal consumption. 6. *Collective consumption* = 24. Other consumption, 7. *Investment* = 25. Investment and capital repairs, 26. Stock increase, 8. *Foreign trade and others* = 27. Export, 29. Unallocated items, 32. Imports.

[3] For a more detailed explanation, the following symbols are introduced:

W_5 = Wages in the non-productive sector (including salaries in the government administration but excluding wages contained in non-productive services sold to households)
K = direct taxes paid by households
L = transfers between government and households
R = net credits to households
Q = increase in cash holdings of households
$Q - R = H$ = net savings by households
T_5 = profit element in non-productive services sold to households.

Then, in the schematic table described above:

$$T_k = K + H = K + Q - R$$
$$W_g = W_5 + L - T_5$$

The table for Poland which serves as a numerical example is somewhat more simplified and the item 37.0 billions consists of the following elements:

$$W_5 + L - T_5 - T_k \text{ or } W_5 + L - T_5 - K - Q + R$$

[4] For each sector, only the difference between the exports ar imports is given.

[5] For a more detailed explanation, see "Problems of Inpu Output Tables and Analysis", *Studies in Methods, Series F*, No. 1 United Nations, New York 1966.

[6] The "wage" costs include all labour incomes of employees.

Each coefficient ${}_ir_{wj}$ represents the volume of wages paid in ctor i per one unit of final demand on the output of sector j.[7] inal demand consisting of four components (private consumption, ollective consumption, investment and foreign-payments balance), was necessary to find the volume of wages paid per unit of final emand component. This value was derived from matrix of final emand structure:

$$\mathbf{D} = \begin{bmatrix} c_1 & s_1 & v_1 & f_1 \\ c_2 & s_2 & v_2 & f_2 \\ c_3 & s_3 & v_3 & f_3 \\ c_4 & s_4 & v_4 & f_4 \end{bmatrix} \tag{9}$$

here:

$$d_i = \frac{D_i}{D} \quad \begin{matrix} (d = c, s, v, f) \\ (i = 1, 2, \dots 4) \end{matrix} \; (D = CSVF) \tag{10}$$

was multiplied by the matrix R_w:

$$\mathbf{R_wD} = [a_{wj}]\,(\mathbf{E} - \mathbf{A})^{-1}\,\mathbf{D} = \begin{bmatrix} {}_1r_{wc} & {}_1r_{ws} & {}_1r_{wv} & {}_1r_{wf} \\ {}_2r_{wc} & {}_2r_{ws} & {}_2r_{wv} & {}_2r_{wf} \\ {}_3r_{wc} & {}_3r_{ws} & {}_3r_{wv} & {}_3r_{wf} \\ {}_4r_{wc} & {}_4r_{ws} & {}_4r_{wv} & {}_4r_{wf} \end{bmatrix} \tag{11}$$

he column totals are:

$$r_{wd} = \sum_i {}_ir_{wd} \quad (d = c, s, v, f) \tag{12}$$

The elements ${}_ir_{wd}$ represent the amount of wages paid in sector per one unit of the "d" component of the final demand.

The relevant figures for the Polish 1957 input-output table, iven in aggregated form in Table 8.30, which were used in the alculations are:

$$(\mathbf{E} - \mathbf{A}) = \begin{bmatrix} 0.605 & -0.174 & -0.008 & -0.016 \\ -0.058 & 0.601 & -0.300 & -0.090 \\ -0.017 & -0.017 & 0.837 & -0.031 \\ -0.012 & -0.039 & -0.035 & 0.926 \end{bmatrix}$$

$$(\mathbf{E} - \mathbf{A})^{-1} = \begin{bmatrix} 1.7087 & 0.5059 & 0.2012 & 0.0854 \\ 0.1894 & 1.7493 & 0.6369 & 0.1946 \\ 0.0397 & 0.0488 & 1.2145 & 0.0460 \\ 0.0316 & 0.0820 & 0.0753 & 1.0909 \end{bmatrix}$$

$$\mathbf{P} = \begin{bmatrix} 0.418 & 0.140 & 0.317 & 0.446 \\ 0.100 & 0.231 & 0.177 & 0.343 \end{bmatrix}$$

$$\mathbf{P}\,(\mathbf{E} - \mathbf{A})^{-1} = \begin{bmatrix} 0.7674 & 0.5084 & 0.5919 & 0.5641 \\ 0.2325 & 0.4915 & 0.4080 & 0.4358 \end{bmatrix}$$

$$\mathbf{R}_w = \begin{bmatrix} 0.7142 & 0.2114 & 0.0841 & 0.0357 \\ 0.0265 & 0.2449 & 0.0892 & 0.0272 \\ 0.0126 & 0.0155 & 0.3850 & 0.0146 \\ 0.0141 & 0.0366 & 0.0336 & 0.4866 \end{bmatrix}$$

$$\mathbf{D} = \begin{bmatrix} 0.217 & 0.000 & 0.058 & 0.325 \\ 0.629 & 0.577 & 0.127 & 0.408 \\ 0.033 & 0.289 & 0.813 & 0.467 \\ 0.121 & 0.134 & 0.001 & -0.200 \end{bmatrix}$$

The results of the product of $\mathbf{R_wD}$ are presented in Table 8.31 (*a*) or the Polish 1957 input-output table, and in Table 8.31 (*b*) the ame data for the Bulgarian input-output table are presented, both er national currency unit (i.e. 1 billion zlotys and 1 million levas) nd per one per cent of the relevant component of final demand[8] marked with an asterisk).

The figures in the table call for some explanation. The difference between one unit and the wages paid per unit according to formula (7) gives the gross profit element of the particular final demand component (for example, in private consumption in Poland in 1957 it amounts to 42.6 per cent, in investment to 40.9 per cent, etc.). The negative signs of some items in the foreign-trade column mean that a positive change of foreign trade by one unit or one per cent reduces the internal wage bill by the amounts shown in the above table. Since the Polish balance of foreign trade in 1957 was negative, the negative balance of the first three sectors saved wages, and the active balance of the last sector expanded the internal wage bill. The sum of wages paid per one per cent of the particular final demand components, multiplied by 100, gives the total wage bill in Poland and Bulgaria in the given year and its structure. The wage bill in the productive sectors can therefore be written as the sum of the wage content of each component of final demand:

$$\sum_{j=1}^{4} W_j = W_c + W_s + W_v + W_f = \sum_d W_d$$

This form is used in Chapter 10.

Figures in Tables 8.31 (*a*) and 8.31 (*b*) provided the basis for the calculations of the "multiplier" effect and of the ratio between the development of the output and the volume of wages (or between productivity and average wages). However, it was necessary to proceed from the following assumptions:

(*a*) The technology of production (the production functions) and prices are stable (i.e. the elements of the **A** and **P** matrices do not change);

(*b*) The structure of final demand components is stable (i.e. the elements of the **D** matrix do not change).

The "multiplier" effect is defined as the ratio between an autonomous change of some particular final demand component (apart from private consumption) and the change in deliveries for private consumption necessary to secure the equilibrium of demand and supply.

The formula is as follows:

$$\Delta\, C_d = \frac{r_{wd}}{1 - r_{wc}}\,\Delta\, D \quad \begin{matrix} (D = S, V, F) \\ (d = s, v, f) \end{matrix} \tag{13}$$

The formulae for the ratio between the changes in the volume of output and changes in the volume of wages have been derived in the following way. It was assumed that:

(i) the increase of private consumption has to be in equilibrium with the increase of household incomes:

$$\Delta\, C = \Delta\, W \tag{14 (a)}$$

$$\Delta\, C = \Delta\, W_1 + \Delta\, W_2 + \Delta\, W_3 + \Delta\, W_4 + \Delta\, W_g \tag{14 (b)};$$

(ii) the change in W_g is exogenous and does not directly depend on the increase of output of particular sectors;

(iii) the changes in W_j ($j = 1, 2, 3, 4$) depend on the changes of output of productive sectors or can be linked through the coefficients ${}_ir_{wc}$, ${}_ir_{ws}$, ${}_ir_{w}$ and ${}_ir_{wf}$ directly with the changes in the allocation of the components of final demand.

If the rate of change in the volume of the particular component of final demand D equals:

$$I_d = \frac{D_1 - D_o}{D_o} \quad (D = C, S, V, F) \tag{15}$$

(the index o represents the basic period and index 1 the current period), then on the two latter assumptions just mentioned, the changes in wages paid in particular sectors ($\Delta\, W_i{}^*$) are obtained as a product of the $R_w{}^*$ matrix[9] and a vector whose components are I's:

$$[\Delta\, W_i{}^*] = R_w{}^*\, D\, [I_d] \quad \begin{matrix} (i = 1, 2, 3, 4) \\ (d = c, s, v, f) \end{matrix} \tag{16}$$

---

[7] It is obvious that $\sum_i {}_ir_{wj} = r_{wj}$

[8] i.e. for the Polish table, per 2.20 billion zlotys of private consumption, per 0.14 billion zlotys of collective consumption, per .01 billion zlotys of investment and per 0.17 of foreign-trade balance nd for the Bulgarian table 287.4 million levas of private consumpion, 30.0 million levas of collective consumption, 170.0 million levas of investment and 22.0 million levas of foreign-trade balance.

[9] The asterisk means that the data from Tables 8.31 (*a*) and (*b*) on wages paid per one per cent will be used.

TABLE 8.31 (*a*)

Wages paid on final demand components in Poland in 1957

(in billion zlotys)

Final demand / Sectors	Private consumption		Collective consumption		Investment		Foreign trade	
	per 1 billion	per one per cent	per 1 billion	per one per cent	per 1 billion	per one per cent	per 1 billion	per one per cent
	${}_ir_{wc}$	${}_ir^*_{wc}$	${}_ir_{ws}$	${}_ir^*_{ws}$	${}_ir_{wv}$	${}_ir^*_{wv}$	${}_ir_{wf}$	${}_ir^*_{wf}$
Agriculture	0.295	0.649	0.151	0.021	0.137	0.138	0.350	0.060
Consumer-goods industry	0.166	0.365	0.171	0.024	0.105	0.106	0.145	0.025
Investment-goods industry	0.027	0.059	0.122	0.017	0.316	0.319	0.187	0.032
Other productive sectors	0.086	0.189	0.096	0.013	0.033	0.033	— 0.062	— 0.011
Total	0.574	1.262	0.540	0.075	0.591	0.596	0.620	0.106

TABLE 8.31 (*b*)

Wages paid on final demand components in Bulgaria in 1960

(in million leva)

Final demand / Sectors	Private consumption		Collective consumption		Investment		Foreign trade	
	per 1 million	per one per cent	per 1 million	per one per cent	per 1 million	per one per cent	per 1 million	per one per cent
	${}_ir_{wc}$	${}_ir^*_{wc}$	${}_ir_{ws}$	${}_ir^*_{ws}$	${}_ir_{wv}$	${}_ir^*_{wv}$	${}_ir_{wf}$	${}_ir^*_{wf}$
Agriculture	0.254	72.999	0.178	5.340	0.171	29.070	0.705	15.510
Consumer-goods industry	0.166	47.708	0.168	5.040	0.104	17.680	0.168	3.696
Investment-goods industry	0.022	6.323	0.070	2.100	0.242	41.140	— 0.346	— 7.612
Other productive sectors	0.086	24.716	0.088	2.640	0.070	11.900	0.126	2.772
Total	0.528	151.746	0.504	15.120	0.587	99.790	0.653	14.366

If the ΔW_i^*s are inserted into (14) (*b*) three different results may appear:

(*a*) $\Delta C > \Sigma \Delta W_i^* + \Delta W_g$ (17) (*a*)

(*b*) $\Delta C = \Sigma \Delta W_i^* + \Delta W_g$ (17) (*b*)

(*c*) $\Delta C < \Sigma \Delta W_i^* + \Delta W_g$ (17) (*c*)

In particular cases, the changes in incomes from the state and the shifts in the structure of final demand permit:

(*a*) wages to rise faster than output (i.e. the share of wages in the value of output increases);

(*b*) wages to rise simultaneously with the growth of output (i.e. the share of wages in the value of output remains unchanged);

(*c*) wages to rise slower than output (i.e. the share of wages in the value of output decreases).

The situation mentioned under (*b*) will occur[10] if:

$$\sum_d I_d \sum_i {}_ir^*_{wd} + \Delta W_g - CI_c = 0 \qquad (1$$

The situations mentioned under (*a*) and under (*c*) will be mo frequent. If such conditions arise, the volume of wages cannot chan at the same rate as output (or the share of wages in the value output does not remain unchanged) and has to be adjusted. T rate of adjustment will be expressed by a coefficient *b* — whi

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[10] For example, if all the rates I_d are the same and equal I_c, t condition turns into:

$$I_c = (100 \sum_d \sum_i {}_ir^*_{wd} - C) = \Delta W_g.$$

Obviously there exist other, more complicated combinations all the factors entering play, and which may lead to equilibrium.

higher than the one mentioned in case (*a*), equal to the one in e (*b*), and lower than the one in case (*c*). The *b* might be defined an average value *b* (which represents the ratio between the owth of the volume of wages and the growth of the volume of tput) — or as a marginal *b*′ (which represents the ratio between e increase in wages and increase in output).

f the *b* or *b*′ apply to all the productive sectors of the economy verall *b*), the formulae are:[11]

$$b_o = \frac{(1 + I_c)\, C - (W_g + \Delta\, W_g)}{\sum\limits_{j} (W_j + \Delta\, W_j{}^*)} \qquad (19)\ (a)$$

$$b'_o = \frac{I_c C - \Delta\, W_g}{\sum\limits_{j} \Delta\, W_j{}^*} \qquad (19)\ (b)$$

If *b* or *b*′ apply to industrial sectors (sectors 2, 3) only and the incomes in agriculture and other sectors ($\Delta\, W_1$, $\Delta\, W_4$) are fixed exogenously the formulae are:

$$b_{2,3} = \frac{(1 + I_c)\, C - (W_g + \Delta\, W_g) - \sum\limits_{j=1,\,4} W_j + \Delta\, W_j}{\sum\limits_{j=2,3} (W_j + \Delta\, W_j{}^*)} \qquad (20)\ (a)$$

$$b'_{2,3} = \frac{I_c C - \Delta\, W_g - \sum\limits_{j=1,4} \Delta\, W_j}{\sum\limits_{j=2,3} \Delta\, W_j{}^*} \qquad (20)\ (b)$$

The various values of b_o, b'_o, $b_{2,3}$ and $b'_{2,3}$ have been calculated for both the Polish and Bulgarian tables and used in Chapters 8 and 10.

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[11] If the asterisk of the symbol W_j is omitted it means that the lue of the particular item does not equal the value given by forula (16). This is, for example, the case of the *B* and *C* variant in e example in section 8.7 of Chapter 8.

APPENDIX TABLE 8.I

Nominal earnings (monthly average) of workers and employees by broad economic sectors

Country and sector	1950	1960	1964	1964	1950	1955	1960	1964
	Index numbers, 1955 = 100			In national currency	Index, national average = 100			
Bulgaria [a] (leva)								
Total economy [b]	73	125	143	1 076	100.0	100.0	100.0	100.0
Industry	68	121	139	1 104	99.1	105.6	102.4	102.6
Construction	68	122	139	1 311	116.8	125.5	122.9	121.8
Agriculture (state)	68	143	151	939	77.5	82.6	95.1	87.3
Forestry	79	117	142	727	74.2	67.9	63.9	67.6
Transport	76	129	143	1 200	115.5	110.7	114.4	111.5
Communications	86	124	148	889	94.9	79.7	79.4	82.6
Trade	76	121	143	948	91.8	88.1	85.3	88.1
Other branches of material production	84	122	132	1 102	128.9	110.7	108.6	102.4
Housing and communal services	72	118	136	902	87.0	87.9	83.6	83.8
Scientific institutions	92	117	156	1 162	125.6	98.8	93.0	108.0
Education	86	124	146	991	106.0	89.9	89.9	92.1
Public health	72	127	142	920	85.6	86.2	87.5	85.5
Finance, credit and insurance institutions	90	114	141	999	116.1	94.0	86.3	92.8
Administration	77	133	163	1 159	100.2	94.6	101.2	107.7
Other branches not contributing directly to material production	74	139	164	1 248	102.6	100.9	112.6	116.0
Czechoslovakia (kčs)								
Total socialist economy	(1953) 91	114	121	1 430	(1953) 100.0	100.0	100.0	100.0
Industry	92	112	118	1 514	108.5	107.8	105.9	105.9
Construction	93	112	120	1 625	115.4	113.8	112.5	113.6
Agriculture (state)	86	123	138	1 235	71.4	75.7	82.0	86.4
Forestry	85	119	127	1 351	83.7	89.7	93.6	94.5
Transport (productive)	92	117	129	1 623	106.9	106.4	109.2	113.5
Communications (productive)	95	117	125	1 269	89.7	85.9	88.3	88.7
Trade	84	111	121	1 189	76.4	83.1	80.7	83.1
Material supplies	89	110	119	1 393	96.5	98.7	95.8	97.4
Procurements	91	118	119	1 267	89.2	89.7	93.0	88.6
Non-productive sectors	91	112	118	1 310	92.9	93.3	92.7	91.6
Education, culture and sports	93	118	122	1 260	89.3	95.4	90.9	88.1
Public health	98	116	118	1 163	89.3	90.6	93.5	81.3
Communal services	90	105	107	1 064	82.8	95.6	77.3	74.4
Eastern Germany (MDN)								
Total socialist economy [c]	..	128	141	610	..	100.0	100.0	100.0
Industry	..	125	137	631	..	106.3	103.6	103.4
Construction (state)	..	135	147	654	..	103.2	108.6	107.2
Agriculture and forestry (state)	..	143	155	552	..	82.6	91.7	90.5
Transport	..	134	150	651	..	100.2	104.5	106.7
Communications	..	136	164	565	..	80.0	84.3	92.6
Trade	..	132	141	515	..	84.5	86.5	84.4

Hungary (forints)								
Total state economy	60	138	154	1 750*	100.0	100.0	100.0	100.0
Industry	60	133	145	1 759	107.3	106.6	102.7	100.5
Construction	57	137	152	1 817	99.4	104.8	104.1	103.8
Agriculture (state)	45	147	163	1 500	60.4	80.9	86.2	85.7
Transport and communications	57	135	156	1 738	92.1	97.5	95.4	99.3
Trade	68	142	154	1 543	99.3	87.7	90.0	88.2
Administration, health and cultural institutions	63	140	153	1 684	101.5	96.8	97.8	96.2
Poland (zlotys)								
Total socialist economy	(1953) 90	154	174	1 888	(1953) 100.0	100.0	100.0	100.0
Industry	89	154	172	2 035	108.3	109.2	109.5	107.8
Construction	92	146	166	2 195	125.5	122.0	115.7	116.3
Agriculture (state)	81	159	197	1 537	69.8	76.7	79.6	81.4
Forestry	88	165	193	1 376	64.4	65.9	70.7	72.9
Transport and communications	87	148	177	1 916	97.2	100.2	96.8	101.5
Trade	93	152	170	1 537	87.5	83.7	82.7	81.4
Communal services	86	141	182	1 774	85.8	89.8	82.4	94.0
Education, science and culture	86	153	178	1 733	86.4	90.1	89.8	91.8
Health, social welfare and sports	82	171	197	1 499	64.1	70.4	78.4	79.4
Administration and justice	91	165	204	2 091	96.1	94.7	101.5	110.8
Banking and insurance	97	158	181	1 776	97.8	90.5	93.3	94.1
Soviet Union [d] (roubles)								
Total economy	..	103	116	90.1	..	(1958) 100.0	100.0	100.0
Industry	..	105	115	100.5	..	112.0	114.0	111.5
Construction	..	106	122	106.0	..	111.4	114.5	117.6
Agriculture (state)	..	102	133	70.6	..	68.3	67.3	78.4
Transport	..	105	124	102.2	..	105.8	108.2	113.4
Communications	..	107	126	73.3	..	74.6	77.8	81.4
Trade	..	101	113	65.7	..	74.6	73.2	72.9
Communal services	..	104	116	64.5	..	71.2	71.9	71.6
Public health	..	100	112	65.8	..	75.7	73.5	73.0
Education	..	101	113	78.5	..	89.2	87.2	87.1
Scientific institutions	..	98	106	112.6	..	136.1	130.0	124.3
Credit and insurance	..	98	110	79.0	..	92.7	87.8	87.7
Administration	..	102	114	95.8	..	108.2	106.9	106.3

Sources: National statistics.

NOTE.—All totals exclude co-operative agriculture.

[a] Annual wages.

[b] Excluding private enterprises.

[c] Excluding branches outside material production.

[d] 1958 = 100.

APPENDIX TABLE 8.II

Nominal earnings (monthly average) of workers and employees by industrial branches

Country and branch	1950	1960	1964	1964	1950	1955	1960	1964
	Index numbers, 1955 = 100			*In national currency*	*Index (total industry = 100)*			
Bulgaria [a]								
Total (state industry)	68	120	138	1 122	100.0	100.0	100.0	100.0
Energy	73	120	145	1 194	109.6	101.1	101.1	106.4
Fuel	73	127	143	1 442	132.5	123.2	130.2	128.5
Ferrous metallurgy	71	107	127	1 336	135.4	128.4	114.9	119.1
Non-ferrous metallurgy	64	117	132	1 457	126.8	135.0	131.8	129.9
Engineering, metalworking	67	121	135	1 166	104.2	105.9	106.5	103.9
Chemicals	68	116	129	1 103	105.1	104.5	101.0	98.3
Building materials	71	121	137	1 179	110.3	105.8	106.9	105.1
Timber and wood processing	72	122	138	1 173	110.3	103.9	105.4	104.5
Cellulose and paper	73	122	138	1 042	98.7	92.3	93.9	92.9
Glass and ceramics	74	123	136	1 083	107.4	97.8	99.9	96.5
Textiles	66	122	140	957	81.9	83.7	84.9	85.3
Clothing	70	121	140	911	83.4	80.0	80.8	81.2
Leather and footwear	78	123	137	1 058	108.3	94.5	96.7	94.3
Printin	69	120	132	1 013	95.7	93.9	94.3	90.3
Food processing	65	122	143	1 009	83.4	86.5	87.9	89.9
Other branches of industry	66	122	133	966	86.8	88.8	90.7	86.1
Czechoslovakia [b] (only manual workers)								
Total (socialist industry)	..	110	118		100.0	100.0	100.0 [c]	..
Energy	..	112	119		118.3	114.7	116.1	..
Fuels, coals and petroleum products	..	113	121		124.5	139.2	142.2	..
Ferrous metallurgy	..	108	114		126.9	125.7	122.6	..
Non-ferrous metallurgy including mining ores	..	107	113		120.4	118.0	112.5	..
Chemicals, including rubber	..	108	116		101.4	100.8	98.8	..
Engineering and metal using	..	109	117		106.7	103.9	104.5	..
Building materials	..	110	117		101.1	105.8	107.3	..
Textiles	..	112	119		67.9	74.8	74.7	..
Clothing	..	112	123		78.1	70.4	70.8	..
Leather and footwear	..	109	116		92.7	88.6	85.2	..
Food processing	..	112	118		99.9	90.4	90.6	..
Eastern Germany [d]								
Total (socialist industry)	..	125	137	631	..	100.0	100.0	100.0
Energy	..	126	136	629	..	100.9	101.7	99.7
Mining	..	124	139	747	..	117.2	116.0	118.4
Metallurgy	..	118	130	742	..	124.4	117.6	117.6
Chemicals	..	125	137	651	..	103.5	103.5	103.2
Building materials	..	134	144	628	..	95.0	101.6	99.5
Heavy engineering	..	118	129	702	..	118.3	111.5	111.3
General engineering		119	132	658		108.7	103.7	104.3

Shipbuilding	..	114	123	695	..	122.7	111.8	110.1
Casting and forging	..	121	132	690	..	113.7	110.3	109.4
Metalware	..	126	141	590	..	91.1	91.5	93.5
Electro-engineering	..	118	129	622	..	104.8	98.6	98.6
Fine mechanics and optical industry	..	123	137	612	..	97.2	95.5	97.0
Woodworking and cultural goods	..	133	144	572	..	86.3	91.8	90.6
Textiles	..	134	146	508	..	75.8	81.2	80.5
Clothing	..	143	153	491	..	69.9	79.8	77.8
Leather and footwear	..	133	141	532	..	82.4	87.5	84.3
Cellulose and paper	..	137	149	578	..	84.7	92.7	91.6
Printing	..	128	136	576	..	92.2	94.4	91.3
Glass and ceramics	..	136	146	609	..	90.8	98.8	96.5
Food processing	..	131	141	558	..	86.1	89.7	88.4
Hungary								
Total (state industry)[a]	60	136	148	1 708	100.0	100.0	100.0	100.0
Electric energy	64	138	149	1 709	107.1	99.4	100.3	100.1
Mining	50	146	163	2 475	111.3	131.7	141.1	144.9
Ferrous and non-ferrous metallurgy	61	128	139	1 807	115.9	112.7	105.8	105.8
Machine building	62	130	143	1 737	109.9	105.3	100.4	101.7
Electro-engineering	66	128	144	1 645	108.8	98.9	92.5	96.3
Precision engineering	62	128	136	1 674	111.4	106.7	100.4	98.0
Iron and metalware	63	135	147	1 581	98.1	92.8	91.7	92.6
Building materials	56	139	152	1 630	87.4	92.9	94.5	95.4
Chemicals	66	137	..	1 597	102.3	93.0	93.2	93.5
Rubber and synthetic materials	73	130	..		114.1	93.4	89.6	
Wood-working	59	138	148	1 529	89.0	89.4	90.7	89.5
Paper	63	135	146	1 572	97.8	93.4	92.2	92.0
Printing	66	134	142	1 560	105.5	95.1	93.3	91.3
Textiles	64	139	152	1 405	85.7	80.2	81.5	82.3
Leather and fur industry	66	140	135	1 483	105.1	95.1	97.4	86.8
Clothing	59	137	145	1 396	82.0	83.3	83.6	81.7
Miscellaneous	53	137	145	1 494	78.8	88.9	89.5	87.5
Processing of food, beverages and tobacco	62	145	158	1 491	85.2	81.7	86.9	87.3
Poland								
Total (socialist industry)	..	154	172	2 035	100[f]	100.0	100.0	100.0
Energy	..	174	195	2 336	106	101.3	114.6	114.8
Fuel	..	160	175	2 937	..	141.5	147.4	144.3
Coal and briquettes	..	159	175	3 014	141	146.0	151.1	148.1
Ferrous metallurgy	..	151	170	2 545	114	126.2	123.8	125.1
Non-ferrous metallurgy	..	151	164	2 517	116	129.8	127.1	123.7
Engineering	..	149	161	2 078	100	108.9	105.2	102.1
Electro-engineering	..	147	165	1 980		101.3	96.9	97.3
Transport equipment	..	152	165	2 121		108.7	107.1	104.2
Metal ware	..	148	163	1 963	90	101.7	97.6	96.5
Chemicals	..	154	171	1 951	97	96.5	96.9	95.9
Rubber	..	151	166	1 853	41	94.3	92.3	91.1
Building materials	..	148	172	1 945	107	95.6	91.7	95.6
Glass	..	146	169	1 894	89	94.9	90.3	93.1

Appendix Table 8.II *(continued)*

Country and branch	1950	1960	1964	1964	1950	1955	1960	1964
	Index numbers, 1955 = 100			*In national currency*	*Index (total industry = 100)*			
Poland *(continued)*								
Ceramics	..	153	168	1 757	83	88.4	88.0	86.3
Wood-working	..	154	178	1 749	86	83.2	83.0	85.9
Pulp and paper	..	156	173	1 715	92	84.0	85.2	84.3
Printing	..	162	171	1 866	92	92.1	96.7	91.7
Textiles	..	169	186	1 684	78	76.3	83.8	82.8
Clothing	..	150	176	1 515		72.6	70.6	74.4
Leather and footwear	..	147	167	1 652	101	83.5	79.6	81.2
Food processing	..	152	173	1 725	92	84.5	83.3	84.8
Salt industry	..	179	204	2 148	98	88.9	103.2	105.6
Others	..	155	175	1 775	..	85.8	86.3	87.2

Sources: National statistics.

[a] Annual averages.

[b] Relevant data are not currently published; the index numbers have been reproduced from S. Balek, *Mzdova diferenciace a preference v ceskoslovenskem prumyslu*, Prague 1962, p. 126.

[c] 1959.

[d] Calculated on the basis of full-time employed workers and employees.

[e] Workers only.

[f] State industry only.

APPENDIX TABLE 8.III

Percentage distribution of workers and employees by size of monthly earnings in four countries

Bulgaria				Czechoslovakia[a]			Hungary[b]					Poland[a]				
Monthly earnings in leva	1957	1960	1962	Monthly earnings in kčs	1959	1964	Monthly earnings in forints	1952	1955	1958	1964	Monthly earnings in zlotys	1956[c]	1960[c]	1962[d]	1964[a]
Up to 50	24.2	14.1	4.3	Up to 600	1.7	0.3	Up to 500	13.1	4.0	3.1	2.5	Up to 500	3.3	3.1	2.7	—
50-60	21.4	10.5	12.3	600-800	6.4	2.9	500-600	11.7	6.4			500-600	5.1			—
60-80	28.8	30.1	32.1	800-1000	13.4	10.0	600-700	27.6	8.3			600-700	6.8	2.1		—
80-100	15.0	19.7	24.5	1000-1200	17.0	15.6	700-800		11.2	3.5		700-800	8.4	2.6	2.6	3.7
100-150	8.8	15.6	22.3	1200-1400	16.7	16.0	800-1000	20.0	23.0	13.1	6.6	800-900	9.3	3.8	3.3	2.7
over 150	1.8	4.0	4.5	1400-1600	15.0	15.0	1000-1200	11.6	17.8	18.1	11.0	900-1000	9.6	4.5	4.0	3.2
				1600-1800	11.4	13.4	1200-1500	9.0	15.5	24.8	22.0	1000-1200	16.3	11.6	10.4	8.1
	100.0	100.0	100.0	1800-2000	7.4	10.0	1500-1700	4.8	9.7	25.3	14.2	1200-1500	17.0	19.0	18.4	15.8
				2000-2500	7.8	11.8	1700-2000				17.3	1500-2000	14.3	25.2	25.8	26.4
				2500-3000	2.2	3.5	2000-2500	2.2	2.8	8.3	15.8	2000-2500	5.6	14.1	15.3	17.7
				3000-3500	0.6	1.0	2500-3000		0.9	2.6	6.2	2500-3000	2.3	7.0	8.3	10.2
				3500-4000	0.3	0.3	3000-3500		0.4	1.2	2.5	3000-5000	1.8	6.2	8.3	10.9
				over 4000	0.1	0.2	over 3500				1.9	over 5000	0.2	0.8	1.0	1.3
					100.0	100.0		100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0

Sources: Bulgaria: *Planovo Stopanstvo i Statistika* 7/1964, p. 16, and *Dvadeset godini socialisticesko stroitelstvo v cifri*, p. 137. Czechoslovakia: *Statistical yearbook 1963*, 1965, pp. 122, 130. Poland: *Statistical yearbook 1960*, p. 392, 1965, p. 469, and *Statistical Pocketbook 1966*, p. 208. Hungary: direct communication from the Central Statistical Office.

[a] State and co-operative sector. [b] State sector. [c] Including apprentices. [d] Excluding apprentices.

CHAPTER 9

THE FORMATION OF FAMILY INCOMES

INTRODUCTION

In the centrally planned economies, for well-known nstitutional and policy reasons — several of which were reated in Chapters 7 and 8, decisions concerning istribution of national income between individual onsumption and non-consumption expenditure are cloely intertwined with decisions concerning the distribution f primary income between the population and the state ector (including enterprises as well as general governnent). Decisions of the latter category take shape in neasures determining the size of the various types of rimary income, both globally and individually. For the ocialist sector as a whole, a global wage fund is estabished and the level of individual wages is governed by set of rules regulating piece rates, time rates, monthly alaries, and various types of premia — all of which vere described in the preceding chapter.

While some question of equity, and related problems f principle, arise at the stage of planning the earnings omponent of incomes already discussed, it is at the tage of redistribution of primary income, when the ize and distribution of earnings from work are remoulded by the incidence of taxation, family allowances and other ransfers, that such questions come to the forefront, onfronting planners with a different range of options rom those facing the authorities in market economies. With the virtual absence of property income and individual profits, the sphere of redistribution of primary ncome by reference to ownership relationships is, of ourse, much smaller in the centrally planned economies. Similarly, the problem of redistribution of income as etween the state and the enterprise sector (indirect axes and profit deductions, versus retained profits) is f a different nature. Further, an institutional characeristic of all the centrally planned economies has been hat personal income-taxes have been particularly small, ince government expenditure has been financed mainly hrough the price system. This characteristic has limited he scope for policies aiming at a redistribution of nominal ncomes of households.

The foregoing remarks do not imply that the redisribution process has played only a subordinate role in haping the size and structure of household incomes and onsumption. For whatever reasons — whether of ideoogical principle or of optimal use of resources available or consumption — policy in all of the centrally planned conomies has set out to assure that a large and growing hare of the population's income consists of social benefits rovided in cash or in kind. As a result, the size and the distribution of household incomes has tended to differ significantly from what would have obtained solely on the basis of the earnings from work of members of the family. Moreover, the secondary distribution of income has undoubtedly also exerted some inverse effect on the structure of earnings. Thus, for instance, the fact that a relatively higher proportion of social benefits accrues to lower income groups cannot have failed to influence the wage system.

Hence, as a logical (though not necessarily chronological) stage in the process of planning the distribution of national income, particularly in the longer run, the factors entering into the formation of family income form a link between the determination of income from work, discussed in the preceding chapter, and the problems of achieving planned equality between consumer demand and supplies discussed in the following chapter. For, evidently, the socio-economic units where income is generated, and those where it is spent, are different. Such types of income as wages, sick-pay and old age pensions, family allowances etc. are received by individual persons. The extent and conditions of their share are largely regulated by economic policy expressed in various criteria (e.g. qualifications, performance, age, number of children etc.). The utilization of personal income takes place, however, in households, the members of which pool their income to make most of their purchases in common. Decisions on the utilization of income individually received by household members are taken on the basis of the need of the living unit. Since it is these decisions which exercise a considerable influence on total consumer expenditure and its composition, in order to project the pattern of consumer demand in any detail, changes in the stratification of household income over the plan period must be known. As a corollary, the probable consequences of economic decisions on income stratification must be studied if the state is to maintain a decisive influence over income distribution.

It has to be added, however, that the relevance of the pattern of distribution of incomes among consuming units is obviously not restricted to planning purposes. The importance of family income as a welfare indicator is manifest. Indeed, welfare depends more on the family's income, and on the size and composition of the family, than on the incomes of its individual members, although for welfare purposes the relevant income is total final income rather than money incomes.

Factors affecting the distribution of wages and other income from economic activity were examined in Chapter 8. Clearly, however, the stratification of incomes from work is not necessarily the same thing as the distribution of incomes among individuals. Wage-earners do not typically live alone: the level of living of the individual wage-earner depends on the level of living of the household in which he lives. In turn, the latter — in addition to being determined by the size of the earnings of each economically active person in the household — is also influenced by the number both of such persons and of dependent family members. Thus, a certain "redistribution" of earnings takes place among individual earners, depending on their distribution among households.

It is germane for policy that the level of material welfare of a particular worker is only partly related to his wage, or to what is assumed to be behind it — namely, his contribution to production. Even if stringent rules could be devised, according to which each worker received wages strictly proportionate to his productive contribution, and assuming that such rules were rigorously observed, the actual standard of living of some workers would be lower, and that of others higher, than their productive contribution. Thus, income-policy measures cannot be considered separately, but must be judged in relation to their effect on *both* the distribution of rewards for work and the distribution of combined family incomes.

It is evidently important for the planning authorities to obtain full information regarding the formation of household income, as well as its differentiation by size and structure, and to study the pattern of expenditure of households in various population groups and income strata. It is only in the light of such knowledge that a choice can be made between alternative policy measures affecting the welfare of various population groups, and that the problem of obtaining the maximum effect from any additional cost to the state of such measures can be resolved. The use to which such knowledge can be put in projecting future patterns of consumers' demand may be equally important.[1]

Notwithstanding their importance for income policy and supply planning, statistical investigations and economic research into problems of family income formation have only recently begun to receive much attention in the centrally planned economies. Since, in earlier years, income policy was regarded as primarily a part of the general policy of social transformation and economic development, little attention was devoted to problems which either could not be placed in that context or were thought to be of no great importance, at least at the initial stage. It was only with the attainment of a higher income level, and with the realization that further growth can be endangered by distortions in incomes relations, that the distribution of family incomes began to be treated as an element of major importance for central planning.

One expression of the increased interest in these problems has been an enlargement of the statistical basis from which knowledge of the formation and distribution of family incomes can be drawn. While household budget inquiries carried out for some years past provided some material on the structure of income and expenditure of households at different income levels, the coverage o the earlier inquiries was small and unrepresentativ Consequently, most countries of the area have — sinc the late 1950s — organized thoroughgoing micro-censuse covering relatively large numbers of households. A notable example is the Soviet survey of families, worker and employees which was carried out in September 195 The survey covered 240 thousand households — almos ten times as many as are covered by the continuou household survey, which is mainly concerned with th pattern of family expenditure.[2] In Hungary, a numbe of extensive surveys have been made since 1960, i which year a survey was completed of the living cor ditions of workers' and employees' families, coverin nearly 19 thousand households.[3] This was followed b a survey of the incomes and living conditions of collective farm households in 1961 (covering 25 thousand families and, finally, by a survey of the whole population in 196 (covering about 15 thousand households). In Czecho slovakia, an extensive survey of the whole populatio was carried out for the year 1958, covering 30 thousan households, and for the year 1960, covering 80 thousan households. In eastern Germany annual surveys c incomes of workers' and employees' families, coverin 30 thousand households, have been conducted sinc 1959.[4] Considerable interest in problems of famil income formation has been shown in Poland, where micro-census of the families of wage- and salary-earner carried out in 1959 (covering 31 thousand families) wa followed in 1962 by a survey covering 35 thousan households, and in 1965 by one covering som 20 thousand.[5]

Some explanation of the use made of the concept c "family" or (its equivalent in this study) "household is called for. Generally, family income inquiries in th centrally planned economies define private household in accordance with what is usually termed the "house keeping unit" concept. This takes a private househol to be made up of persons who share accommodation an pool part or all of their income for the common provisio of basic living needs. Thus, the concept does not exclud unrelated persons from being considered as part of th household. Inquiries revealed, however, that in th overwhelming majority of cases multi-person privat households consisted of persons related by blood c marriage, and that the number of units distinguishe would not differ much if the demarcation line wa rawn on the basis of "family" ties.[6] Since closely elated people, as a rule, pool a high percentage of their ncome, it may be assumed that the notion of "combined" amily income employed here for analytical purposes s not so unrealistic as to invalidate the conclusions drawn. It must be noted, however, that the extent to which income is pooled may depend on a number of factors, among which the composition of the family is perhaps the most important. Thus, a grown-up son or daughter will probably contribute a smaller share of his or her income than a working wife. Still, cases of gainfully employed children contributing no significant share of household expenses are rare, and are treated as such in the investigations mentioned.

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[1] This matter is treated in Chapter 10.

[2] The representativeness of the 1958 sample was criticize however, on the grounds that the sampling frame was that of wag earners rather than of households. This meant that families wit no wage-earners at the time of the inquiry were excluded and thos with a large number of wage-earners were over-represented in th sample. See N. M. Rimashevskaya, *Ekonomicheski analiz dokhod rabochikh i sluzhashchikh*, Moscow 1965, pp. 49-50, and also th *Economic Survey of Europe in 1958*, Chapter IV, section 2, whe the same bias imparted to family budgets was described.

[3] Earlier (in 1957) a survey of the "social economic and cultur situation of engineers, architects and technicians" and of th "stratification of individual farmers by income" was undertake (see L. Lengyel, in *The Standard of Living*, Scientific Conference o Statistical Problems, Budapest, 1-5 June 1961, p. 177).

[4] A more restrictive survey had already been taken in 1957.

[5] See Jan Kordos in *Wiadomosci Statystyczne No. 7,* 1966.

9.1 FACTORS ENTERING THE FORMATION OF FAMILY INCOMES

The distribution of earnings among households is letermined: (*a*) by the prevailing structure of wages nd other earnings from work; (*b*) by the distribution of these earnings among individual income recipients, nd (*c*) by the distribution of individual income recipients mong households. Thus, the effect of any given differentiation in the structure of earnings will be enlarged f, say, individuals holding relatively well-paid jobs have igh secondary other earnings, or if the frequency with vhich relatively better paid workers combine incomes rom different sources is greater than the corresponding requency among less well-paid individuals. The scale of distribution will similarly be extended if households vhose head belongs to a relatively high wage bracket re also those in which the other earners enjoy relatively igh incomes, or if such households are also those comprising a relatively greater number of employed persons.

The above considerations are relevant only to the elationship between the structure of remuneration for *vork* and the stratification of household incomes. But, ipart from income derived from gainful activity, household income consists also of government transfer payments and of services provided in kind. The size of ncome accruing to households in the form of transfer ayments depends, on the size and structure of such ayments and on the distribution of recipients among arious households. Thus, the relative size of such ncome will depend on the presence of pensioners, mothers living alone with their children (without support rom their husbands), stipendists, etc. The size of household income accounted for by direct government services will depend on the types of service rendered and the eed (or desire) of any particular household to make use of them.

Further modifications in the stratification of household ncomes are introduced by taxation — the incidence of which depends, of course, on the tax structure. Progressive direct taxation, particularly when assessed on combined amily income, can provide a powerful tool for influencing the distribution of household incomes. On the other hand, given the typical variations in the expenditure patterns of households belonging to various socio-conomic groups or income levels, there is also room for nfluencing the distribution of incomes by regulating consumer-goods prices. The price stage of the redistribution process is difficult to trace, since the welfare policy elements cannot always be readily distinguished from other factors in price formation; and even if it could be done, assessment of their impact on the size distribution of incomes would be difficult.

The effect of multiple gainful activities

Little information is available concerning the effect on the formation of family income of multiple gainful activities. Generally, a distinction should be drawn between the case of wage- and salary-earners holding more than one job (or deriving, in addition to their main wage, other service income) and peasants who occasionally work as earners, or wage-earners engaged in ancillary agricultural activities. As distinct from regular earnings, little meaning can be attached to the distribution among individuals of income from ancillary agricultural activities. Such income accrues as a rule from shared work undertaken by the whole family — which is also the unit in which the income is spent; consequently, the attempt to attribute income to any one of its members is artificial.

The available information suggests that incomes from secondary activities do not contribute significantly to the total earnings of industrial and related wage-earners. Moreover, if the Polish data can be taken as representative, there appears to be a tendency for the ratio of ancillary wages to total family earnings to remain constant as one moves from lower to higher per capita income groups of households; but at the same time the ancillary income of the family head tends to increase somewhat faster than his income from main employment.[7]

It may be concluded that, although the effect of job combination on the distribution of household incomes of industrial workers is generally not great, there is nonetheless a positive correlation between the level of the per capita income of households and the amount of income derived from other than the main source of

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[6] In one of the Polish surveys, for instance, for each 100 "households" there were on average 102 "families" (see K. Romaniuk in *Zeszyty Naukowe*, No. 47, p. 14).

[7] This is indicated by the following figures for 1960:

	Per capita annual expenditure (thousand zlotys)						
	Up to 4.8	*4.8-7.2*	*7.2-9.6*	*9.6-12.0*	*12.0-18.0*	*Over 18.0*	*All groups*
Percentage ratios of wages from ancillary employment to total family earnings . . .	6.6	8.0	7.2	7.1	7.0	7.2	7.4
Percentage ratio of wages from ancillary employment of the head of household to his income from main employment .	5.8	8.0	7.8	8.1	8.4	8.6	8.1

Source: Praca i zabezpieczenie spoleczne, No. 7, 1961, p. 17.

employment. That the earning capacity in secondary employment of individuals with better paid positions in their primary employment is higher than the corresponding earning capacity of individuals holding inferior positions in their main line of activity was, of course, to be expected. It is worth noting, however, that this relationship is not balanced by a tendency — which might also have been expected — for less well paid workers to take on extra jobs more frequently than better paid workers.[8]

The importance of income from ancillary employment is apparently greater among salary-earners, secondary employment being particularly widespread among highly qualified professional people.[9] As a result, the average individual earnings of professionals tend to exceed significantly the salary from their main occupation. In so far as average professional salaries are higher than the average for all workers and employees, this factor also contributes to a relatively greater differentiation in the structure of family incomes than in the structure of earnings. It should be added, however, that in some activities professional salaries have lagged behind (partly *because* the total income was known to be higher than the statutory wage), in which case the effect has been the opposite.

The remaining factors entering the formation of household incomes and influencing their distribution by size can be grouped under two main headings: (i) effects of government policies in respect of taxation and social benefits, etc., and (ii) effects of demographic and socio-economic factors as reflected in the size distribution of households, activity rates, etc. In what follows a short account is provided of the prevailing social security and tax system in the various centrally planned economies, an attempt being made to assess their redistributive impact on family incomes. Then the factors mentioned under (ii) are examined in relation to the formation of household incomes.

The redistributive role of individual taxation, of government welfare payments, and of benefits provided in kind

The fiscal systems of the centrally planned economies have always tended to attach little importance to *income taxation*, which accounts for a relatively small part o budgetary revenue.[10] The relative neglect of this type o revenue is due, *inter alia*, to three reasons. First, since th bulk of personal incomes consists of payment by the stat for goods and services rendered by the individual an co-operative sector — direct taxation is regarded a being tantamount to taking away with one hand wha has been given with the other. Second, progressive direc taxation, in particular, is held to contradict the principle of performance wages and, if assessed on combine family incomes, was regarded as a discouragement t high family activity rates. Finally, a system of individua or combined income taxation is considered difficult t operate.

In consequence, personal income taxation has generall had little effect on the pattern of income distributio among households — although the mere existence o such taxes, and the way the tax system is constructed indicates that the authorities have assigned some distributive role to them. The need to maintain some syste of taxation of personal income has stemmed fro several arguments.

First, the deficiencies of the wage system have ofte resulted, as was shown in Chapter 8, in higher tha planned wage earnings, and the incidence of a progressiv wage tax has been instrumental in reducing such earnings Second, personal income-taxes have provided flexibilit in the treatment of specific population groups such as th self-employed, artisans, writers, those engaged in privat farming, etc.[11] Third, such taxes have allowed the famil situation of the taxpayer to be taken into consideration and have hence permitted a certain redistribution o income at the family level — an aim which, althoug not ranking high among income policy goals, has nonetheless been given some weight in a number of countries Fourth, even in countries where the redistributive effec of personal income taxation was entirely disregarded such taxes — once instituted — could not easily be dispensed with because of the difficulty of shifting to othe sources of public finance.

Existing income-tax systems in the centrally planne economies are characterized by considerable difference in their complexity and basic structure. One featur common to all is that income-tax is basically a wage ta levied on the individual wage-earner at his place o employment. But here the similarity ends. Since a countr by country description of the prevailing tax syste appears in Appendix 9.I, the following paragraphs ar confined to a short outline of the characteristics of, an differences between, the various tax systems.

Tax liability starts in Czechoslovakia at a level of wag income of some 15 per cent of the country's averag wage, the corresponding level in Bulgaria being aroun 20 per cent, in eastern Germany around 30 per cent, i Rumania around 40 per cent, in Poland aroun 50 per cent, and in the Soviet Union around two-third that average. In Czechoslovakia and eastern Germany e maximum rate payable is 20 per cent, in Poland and umania 15 per cent, and in Bulgaria and the Soviet nion 12-13 per cent. In Hungary the existing wage tax annot be considered as an income-tax at all,[12] but the bligatory contribution to the old-age pension scheme in the nature of a personal tax.[13] As can be seen from able 9.1, the tax assessment rate at the average wage vel is nearly twice as high in Czechoslovakia and astern Germany as in Poland, the other countries being an intermediate position. Over the range of incomes overed in the table, the tax rate rises most steeply in astern Germany; since the majority of wage-earners come ithin this range, it may be assumed that, in terms of rogressiveness, the redistributive effect of the wage tax the largest in that country. The progressiveness of the x is also relatively strong in Poland, particularly in the edium and higher wage brackets, and to a lesser extent Rumania. By contrast, Bulgaria and Czechoslovakia ave a moderately rising tax rate over the range of incomes ndicated in the table, while in the Soviet Union the crease is pronounced only in the low- and average-wage rackets.

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[8] While a full explanation is difficult to find, owing to lack of data, one element may be the fact that certain categories of better paid workers possessing special skills (e.g. plumbers, carpenters, masons, repair mechanics, etc.) engage relatively frequently, in addition to their regular occupation, in even better paid private work, demand for which is very high because of shortages of household service facilities. On the other hand, workers who do not possess skills enabling them to engage in private activities would seem to have difficulty in finding secondary employment, since enterprises are generally reluctant to offer jobs on a part-time basis, except in Czechoslovakia and eastern Germany.

[9] This applied particularly to the combination of teaching with other professional activities, but engineers, doctors, economists, etc. also quite often derive ancillary incomes from authorship, consultations, secondment and other assignments. For part of the period under study this was not only tolerated but even encouraged in some countries. However, this policy has been reversed in later years as demand for some skills became less acute. In Poland, for instance, a decree was issued in the early 1960s raising the salary scales for university teachers and research workers by some 50 per cent, but at the same time greatly limiting the scope for secondary employment.

[10] See, for a tabulation of rates and other data, the Appendix t this chapter.

[11] Special tax rates apply to these groups and to the secondar incomes of wage- and salary-earners from these categories. Thes taxes are not dealt with in the following discussion.

TABLE 9.1

Average tax rates[a] on wages at various wage levels

Tax assessment as a percentage of wage

Country	Wage level[b]				
	Low	Intermediate low	Average	Intermediate high	High
ulgaria	4.0	5.8	7.7	9.1	10.1
zechoslovakia	8.8	9.7	10.9	12.8	15.0
astern Germany	—	4.8	10.7	16.6	18.5
ungary[c]	3.0	3.0	3.0	5.0	6.0
oland	—	2.4	5.7	10.4	14.0
umania	0.8	4.5	8.7	12.5	13.2
oviet Union	—	—	6.2	8.0	9.3

Source: See Appendix 9.I.

The data refer to standard rates, applied as follows: Bulgaria, all married wage-earners with children; Czechoslovakia, wage-earners with two dependants; eastern Germany, Class III, with one child; Poland, married wage-earners with one or two children; Rumania, wage-earners with three or less dependants; Soviet Union, married wage-earners with three or less children, and assuming that after the 1961 revision the whole tax structure was raised by 10 roubles.

The five wage levels distinguished are obtained by expressing the level of wages (gross) as a percentage of the average wage in the given country in 1964, as follows: low—45 %; intermediate low—67 %; intermediate high—150 %; high—225 %.

Assessment rate of contributions to old-age pensions.

In addition to their varying degrees of progressiveness, the wage-tax systems of the centrally planned economies differ in the extent to which they are adapted to the family situation of the wage-earner. The tax structure is in this respect entirely different in Czechoslovakia, eastern Germany and, to a lesser extent, Poland (countries where there is quite a considerable differentiation of tax assessment in relation to the number of dependent family members) from that in Bulgaria and the Soviet Union, where only unmarried persons and childless couples are singled out for separate treatment. But this feature of the tax structure cannot be considered in isolation from the prevailing system of family social security allowances, as the absence of differentiation in tax treatment can be offset by a relatively larger differentiation in the provision of such allowances.[14]

Family allowances are certainly the most convenient way of redistributing family incomes in favour of large families, particularly at lower income levels. They exist in all centrally planned economies, but the coverage, rates and qualifying conditions vary considerably from one country to another. Table 9.2 shows for each country the most favoured rates applying to wage-earners. Thus, flat rates are paid in eastern Germany and Rumania, progressive rates (with the number of children) in Czechoslovakia, Poland and the Soviet Union, and first progressive and then degressive rates in Hungary and Bulgaria; no payment is made for the first child in Hungary and only a very small allowance in Bulgaria, whereas in the Soviet Union payment only starts with the fourth child. In Czechoslovakia and Rumania the payment is governed by the maximum gross wage of the household.[15] Moreover, apart from the special case of the Soviet Union (where only children below 5 years of age qualify, the size of the allowance depending on the rank of the child), the maximum age of entitlement also varies widely from one country to another. In Rumania the highest rates shown in the table apply only to urban families; and in Czechoslovakia the rates are reduced for families which also have agricultural incomes.

Even the most favourable rates represent quite different proportions of average wages (and family incomes). Thus, as can be seen from the table, the allowances received for three children in 1964 amounted to roughly one-tenth of average gross wages in eastern Germany, some 15 per cent in Poland, approximately 20 per cent

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[12] The flat 15 per cent payroll tax paid by enterprises in Hungary as introduced in 1959 with the aim of creating a reserve which ould enable the impact of any excessive wage increases on the price vel to be absorbed. Although no such use was made of these reerves, in the later years it was found that the tax fits well into the oncept of a "two channel price", allowing enterprises to make nore rational decisions by discouraging a too lavish use of labour. See also Chapter 8, where this tax is discussed in connexion with mployment policy.)

[13] Hungary is the only country where wage- and salary-earners ave to contribute to the social security system. Beginning from anuary 1966, contributions to the old-age pension scheme are et at 3 per cent of wages for those earning less than 1,800 forints, e rate rising to 10 per cent for incomes above 7,000 forints.

[14] As mentioned in the previous footnote, wage- and salary-earners do not pay any social security contributions in the centrally planned economies, except in Hungary. Hence it is only on the expenditure side that the social security system influences income dispersal.

[15] The maximum qualifying wage level is as follows *(national currencies)*:

	Czechoslovakia	*Rumania*
First child	3 000	2 000
Second child	3 800	2 500
Third child	*a*	3 500
Fourth child and above	*b*	3 500

[a] The allowance for three children (see Table 9.2) is reduced by 30 Kčs between 1,400-2,200, by 60 Kčs between 2,200 and 3,000, by 100 Kčs between 3,000 and 3,800, and by 120 Kčs above 3,800.

[b] The allowance for four children is reduced by 50, 100, 160 and 200 Kčs for the wage categories given in footnote *a*. For each additional child there is a reduction of allowance by 20 Kčs between 1,400 and 3,000 Kčs monthly, and by 40 Kčs for more than 3,000 Kčs per month.

TABLE 9.2

Monthly (cumulative) family allowances

Country	Number of children 1	2	3	4	5	6
	in national currencies					
Bulgaria [a]	1.2	14	27	40	49	59
Czechoslovakia [b]	70	170	430	690	950	1 210
Eastern Germany	20	40	60	80	100	100
Hungary	— [c]	300	510	680	850	920
Poland	65 [d]	165	295	445	595	745
Rumania [e]	100	200	300	400	500	600
Soviet Union	—	—	[f]	4 [g]	10 [g]	17 [g]
	as percentage of average gross wage [h]					
Bulgaria	1.1	13.0	25.1	37.2	45.5	54.8
Czechoslovakia [b]	4.9	11.9	30.1	48.3	66.4	84.6
Eastern Germany	3.3	6.6	9.8	13.1	16.4	16.4
Hungary	—	17.1	29.1	38.8	48.6	52.6
Poland	3.4	8.7	15.6	23.6	31.5	39.5
Rumania [e]	8.3	16.7	25.0	33.3	41.7	50.0
Soviet Union	—	—	—	4.4	11.1	18.9

Source: Prepared from data collated by the International Labour Office.

[a] As from July 1967 a new system of family allowances adjusted to the per capita income of the household will be in operation. Allowances will be paid in the following amounts (*leva*):

Number of children	*Per capita income group* *I*	*II*	*III*
one	5	2	0
two	20	14	10
three	45	34	24
four	50	39	29

For every other child the additional allowance will be five leva in each group. The groups are composed as follows: Group I—families with an annual per capita income of up to 350 leva; Group II—from 351 to 550 leva; Group III—above 550 leva.

[b] Data pertain to allowances received at a wage of less than 1,400 Kčs per month.

[c] Single mothers receive 90 forints for the first child and 240 for two children.

[d] Non-working mothers with a child below 8 years receive additional 37.50 zlotys.

[e] Data pertain to allowances received at a wage of less than 2,000 lei per month.

[f] From the third child onwards a lump sum is granted varying between 20 and 250 roubles, according to the number of children.

[g] Only until the age of 5.

[h] Average gross wage in 1964.

in Hungary, 25 per cent in Bulgaria and Rumania, and 30 per cent in Czechoslovakia. The differences are even larger for families with more children. Nonetheless, even in Czechoslovakia, where rates are most progressive — and at the top of the scale are much higher than anywhere else for families with many children — the allowances received by a family with six children are smaller than the wage which an additional average earner could bring home.

Since the effect of taxes and of family allowances on combined family income to a certain extent offset one another, it is of interest to establish the combined effect of the two elements on the income of wage-earners. Table 9.3 measures this joint effect on the incomes of families with only one breadwinner, distinguished by various wage levels and number of children. The amplitude of variation between small and large households in the figures presented is seen to resemble closely the amplitude of variation in Table 9.2 (lower panel) — not only in Bulgaria, for instance, where the tax structure makes no allowance for the family situation of the taxpayer, but also in eastern Germany, where such differentiation is elaborate. It is also apparent that, owing to the low level of personal income taxation, it is only in small families — even among those whose household head earns a relatively high wage — that family allowances do not match the level of tax paid. Exceptions are the Soviet Union, where net taxation at the level of income equalling the prevailing average gross wage (in one-earner families) reaches families of up to four children, and eastern Germany where the situation is similar at the level of a high wage.

The combined redistributive effect of the tax and family allowance systems is relatively largest in Czechoslovakia and smallest in eastern Germany and the Soviet Union. In eastern Germany this is mainly due to the comparatively small distributive effect of family allowances. In Bulgaria and Rumania, sizable children's allowances result in a relatively high degree of income redistribution between large and small families, although the tax system in these countries produces little or no such effect. A smaller redistributive effect is obtained in Poland, although the effect of children's allowances in that country is augmented by a system of tax assessment differentiated according to the number of dependent family members, and in Hungary, where it is entirely due to the influence of family allowances.

Besides wage taxes and family allowances, old-age, invalidity and survivors' pensions are an important instrument for redistributing money incomes. A conceptual distinction could be drawn between old-age pensions determined according to actuarial principles (e.g. the ze of wage and length of service), which in a sense may e regarded as a postponed wage, and those granted to dividuals whose former employment does not entitle em to a pension. Since, however, in both cases a redis- ibution generally takes place to those with no other eans of support, the effect of the pension system is bviously to reduce the degree of inequality of income istribution. A factor complicating the assessment of the edistributive effect of the pension system is the fact at pensions are frequently the only source of livelihood f small households with no earners, while in others they e either merged with the resources of a larger household combined with the earnings of pensioners who are ill able to find work.[16]

In all the centrally planned economies much progress as been made towards the establishment of a compre- ensive system of old-age, invalidity and survivor pensions or wage-earners and, more recently, for other social ategories — notably collective farmers. The conditions f qualification, coverage, benefits and other technicalities ary considerably from one country to another. Appendix able 9.I, based on information supplied by the International Labour Office, summarizes the main features of the old-age pension systems at present in force.[17]

Inevitably, the table oversimplifies the systems: in particular, there are different qualifying conditions for women, miners, and other workers engaged in difficult or dangerous professions; the rate may also vary according to the job performed, and some categories of workers enjoy special benefits. But in all countries pensions are more or less directly related to the wage earned and — except in Poland — to the length of employment of a wage-earner, although most countries pay a minimum pension to whose who satisfy the qualifying conditions.

In spite of the introduction of minimum pensions and of special schemes for assisting those who do not qualify for full pensions, there is practically everywhere a "hardship" category of isolated elderly people (or aged couples) who have no income apart from a very small pension, or who are not entitled to any pension at all. Since this category consists largely of people who were not wage-

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[16] The combination of old-age pensions and gainful activity is ermitted either without restrictions as in eastern Germany, or with ome, as in Hungary.

[17] In practically all countries, survivors' pensions are granted to widows and orphans of beneficiaries of old-age or invalidity pensions, as a variable fraction of the original pension entitlement. Disability or invalidity pensions are also geared to wages, at rates which are at least equal to old-age pensions, but with more liberal qualifying conditions.

TABLE 9.3

Combined effect of wage taxes and family allowances on families with non-working mothers, at various wage levels[a] and number of children

Net benefits as percentage of gross wage

Country and wage level		Number of children					
		1	2	3	4	5	6
Bulgaria	(1) Low wage	– 2.9	9.0	21.1	33.2	41.5	50.8
	(2) Average wage	– 6.6	5.3	17.4	29.5	37.8	47.1
	(3) High wage	– 9.0	3.0	15.0	27.1	35.4	44.7
Czechoslovakia	(1) Low wage	– 3.9	5.7	25.7	45.7	63.8	82.0
	(2) Average wage	– 6.0	4.3	22.4	41.5	58.2	75.0
	(3) High wage	–15.0	1.4	15.6	29.8	46.5	63.3
Eastern Germany	(1) Low wage	3.3	6.6	9.8	13.1	16.4	16.4
	(2) Average wage	– 7.4	– 2.0	3.2	8.2	13.3	14.4
	(3) High wage	–15.2	–11.1	– 7.1	– 3.0	1.2	2.0
Hungary	(1) Low wage	– 3.0	14.1	26.1	35.8	45.6	49.6
	(2) Average wage	– 3.0	14.1	26.1	35.8	45.6	49.6
	(3) High wage	– 6.0	12.1	23.1	32.8	42.6	48.6
Poland	(1) Low wage	3.4	8.7	15.6	23.6	31.5	39.5
	(2) Average wage	– 2.3	3.0	12.0	20.0	30.1	39.5
	(3) High wage	–10.6	– 5.3	6.6	14.6	28.0	31.5
Rumania	(1) Low wage	7.5	15.9	24.4	32.7	41.1	49.4
	(2) Average wage	– 0.4	8.0	18.9	27.2	35.6	43.9
	(3) High wage	–13.2	–13.2	15.8	24.1	32.5	40.8
oviet Union	(1) Low wage	0	0	0	4.4	11.1	18.9
	(2) Average wage	– 6.2	– 6.2	– 4.3	0.1	6.8	14.6
	(3) High wage	– 9.3	– 9.3	– 6.5	– 2.1	4.6	12.4

Source: Derived from Table 9.2 and Appendix 9.I. Data for Czechoslovakia and Rumania corrected by using the information given in footnote 15 of text.

[a] The wage levels are defined as in Table 9.1.

earners long enough to qualify, its size is being gradually reduced as wage-earners who took up the ample employment opportunities of the postwar period attain pensionable age, and as old-age pensions are extended to collective farmers. Additional pension schemes, based on voluntary contributions, also exist in some countries of the area.

The other components of the social security system are basically the same in all the countries studied. They comprise sickness benefits, representing a percentage of the average basic wage varying according to length of employment,[18] three-months maternity benefits — generally amounting to leave on full pay (subject to 1-3 years' previous employment), and a number of miscellaneous cash benefits. These various benefits differ in their redistributive effects. Thus, sickness benefits (including maternity benefits), which are paid only to wage-earners, can be considered as neutral,[19] particularly since they are everywhere strictly tied to the average wage normally received by the beneficiary (and sometimes to the length of his or her tenure).

It is in the nature of many *social benefits in kind* that, for reasons of scarcity or others, they are enjoyed by only some of those who are in principle entitled to them. The supply of social benefits in kind can vary from region to region, between urban and rural areas, between small and large towns, etc. Some of the services provided without payment, or with a high element of subsidy, are more readily used by one group of people than another. The distribution of higher education, for example, is likely to be uneven among various population groups and income strata, better-off families being, perhaps, relatively more disposed to take advantage of educational opportunities.[20] The use of a number of communal facilities and services are also unevenly distributed. Nonetheless, the provision of social benefits in kind may be said to constitute, by and large, a system of distribution "to everyone according to his needs", inasmuch as the direct link with wage-earnings is much less important than the redistributive aspects. This is particularly true of the principal benefits — free general education, and medical care. These benefits have an important equalizing effect on incomes, since they tend to be proportional to the size of the household and are completely unrelated to the size of earnings. Consequently, the growth of the share of these benefits in total real income over time would indicate, all other things being equal, an increasing tendency towards the equalization of combined family income per capita.

While the relative share of social benefits in kind has tended to increase in most centrally planned economies, it is practically impossible to analyse quantitatively th redistributive effect of these benefits, and a compariso between countries is, *a fortiori*, impracticable.

Demographic and socio-economic conditions affecting th formation of family incomes

Other things being equal, the larger the family and th higher the rate of participation in gainful activity of it members, the greater its joint income may be expecte to be. In other words, the size distribution and th activity rate of families are important factors directl determining the distribution of their income. Indirec factors include the age and sex composition of the population, institutions enabling mothers to undertake gainfu employment (such as nurseries, kindergartens), the leve and the geographical distribution of demand for labour psychological and economic factors affecting decision to enter the labour force, etc.

Pursuit of the objective of mobilizing as fully as possibl all available labour resources has meant that considerabl efforts have been made to increase the number of job open to women and to reduce the obstacles to womer taking up employment. In a number of countries, institutional limitations on employment of old-age pensioner able and willing to work have also been removed.

Activity rates are generally high in the centrally planne economies[21] although — as can be seen from Table 9.4 — they differ significantly from one country to another.[22] These differences can be decomposed as follows: (*a*) th age structure of the population; (*b*) the proportion o sexes in the prime working age; (*c*) the activity rat among males and females in the prime working age and (*d*) the activity rates among the young and the ver old age groups.

Traditional attitudes may still be an important facto accounting for the wide inter-country variation in femal activity rates, as is the relative importance of agricultur as a source of livelihood. It is this latter factor whic mainly explains the high female activity rates in Bulgari and Rumania (although it should be noted that thes rates are statistically over-stated, in the sense that the conceal a significant degree of seasonal inactivity i agriculture). An important factor working in the opposit direction in the less industrialized countries of the regio is the existence of areas where the level of demand fo industrial labour, and for unskilled women in particular is low. On the supply side, the relatively greater geographical immobility of female labour and lack of qualifications are also important limiting factors, especiall

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[18] In order to check labour turnover, the length of employment in the same enterprise is also taken into consideration in some countries.

[19] This is true over the longer period. In the short term, sickness benefits represent a redistribution in favour of those who temporarily are unable to earn any income.

[20] Note, however, that although low or zero tuition fees tend to benefit students belonging to more and to less affluent families alike, in most centrally planned economies the latter group is likely to benefit more from stipends. Also students residing out of town — most often from peasant families — are more likely to use heavily subsidized dormitory facilities.

[21] For a discussion of male and female activity rates, and change in them, during the 1950s, see *Some Factors in Economic Growt in Europe during the 1950s* (SURVEY for 1961, Part 2), 1964, Chapte IV, section 1.

[22] The comparability of data on activity rates, in common wit the data on households, is reduced by statistical limitations arisin in the treatment of various categories. For the countries included i the table, the most important such factor is apparently the treatmen of persons in part-time employment. While in all countries ther seems to be some minimum limit of working time specified for th purpose of classification, the number of hours required appears t vary significantly. The data for women, young and aged persons ar those chiefly affected.

TABLE 9.4

Population characteristics relevant to the rate of economic activity[a]

Percentage ratios

Population group	Bulgaria[b]	Eastern Germany (1964)	Hungary (1960)	Poland (1960)	Rumania[b]	Soviet Union (1959)
opulation of prime working age in relation to total population	58.8	59.4	58.1	54.9	57.9	56.3
opulation of males in the population of prime working age	50.1	44.6	47.7	47.7	48.6	42.5
conomically active people in :						
Total population	54.5	49.4	49.0	47.3	59.8	47.5
Male	63.3	60.5	65.9	55.1	67.4	54.8
Female	45.7	40.0	33.2	40.1	52.7	41.5
Population of prime working age	81.2	77.3	69.5	76.4	85.3	..
Male	93.8	95.1	95.2	89.9	97.1	..
Female	68.6	63.0	46.1	64.0	74.3	..
Other age groups	16.2	[c]	20.9	11.9	[c]	..
Male	19.6	[c]	26.2	13.2	[c]	..
Female	13.5	[c]	14.9	10.8	[c]	..
of which :						
15 to 19	..	..	65.8	43.9	..	..
Male	..	..	78.9	46.5	..	..
Female	..	..	52.5	41.2	..	..
65 and over	39.3	16.8	35.9	39.9	..	..
Male	59.7	31.3	57.0	55.6	..	..
Female	23.1	7.4	20.7	30.3	..	..

Source: United Nations, *Demographic Yearbook 1964*, Table 8; and *Statistisches ahrbuch 1966*, p. 527.

Population of prime working age is defined to include the age groups 20 through 64 years, except that the data relating to economically active population refer in eastern Germany to the age groups 17 to 64, and in Rumania to the age groups 20 to 59.

[b] Figures on the distribution of the population by age and sex relate to the year 1963, those on economic activity rates to the year 1956.

[c] Available breakdown by age groups not strictly comparable with that for the other countries, see footnote *a*.

n respect of middle-aged and elderly women. And, otwithstanding the system of nurseries and kindergartens,[23] mothers with young children also find it ifficult to take on regular, full-time work outside the ome.

Available data do not permit an exact measurement of emale activity rates for agricultural and non-agricultural ouseholds separately. It is nonetheless plain that, lthough the statistical rates are generally lower in non-gricultural than in agricultural households, they remain igh in all the centrally planned economies, the highest ates occurring in eastern Germany, the Soviet Union nd, apparently, in Czechoslovakia. According to the oviet census statistics for 1959, among each 100 women of all ages) classified as belonging to "workers' and mployees' households", 38 were gainfully employed. n Poland the rate for "urban" households (according o the 1960 census) was 31 per cent, and in Bulgaria the igure for households classified as non-agricultural was 2 per cent in 1965. Since, in eastern Germany, the roportion of the labour force engaged in agriculture is relatively small, Table 9.4 suggests that the corresponding rate in that country is even higher than for the Soviet Union.[24]

The *family pattern of distribution of the population* is another factor that has to be considered. Even if the activity rates in the various countries were identical, the distributive effect of the "clustering" of income recipients in family units would not, of course, be equal. The distributive effect would depend, firstly, on the number of family units into which the population combines — which in turn determines the number of heads of households or main family earners. It depends, secondly, on the existence of divergencies in the family pattern of population distribution around its central tendency — which in turn determines the number of third, fourth, etc. earners in all households.[25] The family pattern of distribution of the population, or the size distribution of households, in addition to influencing the distribution of income recipients (and income) among households, has also a significant effect on the structure of per capita income.

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[23] Although the network of nurseries is extensive, it can cater for nly a fraction of the infants under three years old. The number of laces in permanent nurseries in relation to the total number of hildren aged up to 3 years is of the order of 3 per cent in Poland, 0 per cent in Hungary, 14 per cent in east Germany, 15 per cent in zechoslovakia, and 13 per cent in the Soviet Union.

[24] After allowing for the lower age-group in the east German data.

[25] Thus, the tendency of a given population to combine in relatively fewer households (small and large) will be expressed in relatively greater numbers of second earners, and a correspondingly lower number of third and fourth earners. As in the case of a relatively larger number of households (smaller average size), such a tendency will result in a reduction of the redistributive effect of the "clustering" of income recipients.

As can be seen from Table 9.5, the family pattern of distribution of the population differs considerably from one country to another. Generally speaking, the average family size tends to be larger in the less industrially developed countries. Pronounced differences appear, however, also among countries at comparable levels of development — such as Czechoslovakia and eastern Germany,[26] or Hungary and Poland. More detailed analysis of the data shown in this table also reveals significant differences in the shape of the family distribution curves around their central tendency, as can be seen from the figures in the next column.

Percentage of the population living in relatively small and large households[a]

Country	*Small*	*Large*
Bulgaria	14.7	16.8
Czechoslovakia . . .	15.5	16.4
East Germany	18.2	21.9
Hungary	15.1	18.1
Poland	14.3	17.0
Urban	16.1	15.4
Rural	12.9	12.9

[a] Relatively small households are those of one-half of the size of the median; relatively large households include households the size of which is 50 per cent larger than the median.

The appreciable differences in activity rates and in the degree of "clustering" of the population into household units naturally results in varied pattern of distribution of economically active persons among family units. For instance, in eastern Germany there were on average 1.24 economically active persons per household,[27] the corresponding figure for Poland being 1.63. Thus, in the forme country, for each 100 main earners among the economically active population, there were around 30 second third, etc. earners,[28] whereas in Poland there were aroun

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[26] Part of the difference between the two countries may arise, however, in connexion with the somewhat different concept of household used in the Czechoslovak Population Census (see footnote to Table 9.5).

[27] Including households in which there are no economically active members (sources as for Tables 9.4 and 9.5).

[28] The terms "main earner" or "first earner" are used here t denote a person who either is the only bread-winner or whos earnings are the highest among family members. Correspondingly the terms "second", "third", etc. earners are used to denote person whose earnings are second, third, etc. in rank. The term "head o household" is used in many cases interchangeably with that of mai earner or first earner, although these terms do not always precisel relate to the same person — the difference arising from the fact that in most household surveys, it was left to the surveyed family itsel to identify its head.

TABLE 9.5

Average size of private households and distribution of the population by size of household, latest available data[a]

Country and year	Average number of people per private household	Percentage of the population in households of a given size (Number of persons in household) 1	2	3	4	5	6	7 and over
		Total population						
Bulgaria *(1965)*	3.18	5.15	12.9	20.4	26.3	16.4	11.6	6.9
Czechoslovakia *(1961)*	3.10	4.6	17.3	21.4	26.1	16.0	7.8	6.8
Eastern Germany *(1964)*	2.50	10.9	24.7	24.4	20.4	19.4		
Hungary *(1960)*	3.10	4.7	16.9	22.9	24.0	15.8	8.1	7.5
Poland *(1960)*	3.45	4.7	10.8	16.6	23.0	19.5	12.6	12.9
Urban areas	3.09	6.8	13.0	19.2	25.8	18.4	9.5	7.3
Rural areas	3.85	2.8	8.8	14.1	20.4	20.4	15.5	18.0
		Population living in households with two or more members						
Bulgaria *(1965)*	3.64		13.7	21.6	27.8	17.3	12.3	7.3
Czechoslovakia *(1961)*	3.45		18.1	22.3	27.4	16.7	8.0	7.5
Eastern Germany *(1964)*	3.07		27.7	27.4	22.8	22.1		
Hungary *(1960)*	3.45		17.8	24.1	25.2	16.5	8.6	7.8
Poland *(1960)*	3.92		11.3	17.4	24.0	20.4	13.2	13.7
Urban areas	3.65		13.9	20.6	27.6	19.7	10.2	8.0
Rural areas	4.19		9.0	14.5	21.0	20.9	15.7	18.9
Rumania *(1956)*	3.64		15.8	21.2	22.5	17.4	11.3	11.8
Soviet Union *(1959)*	3.72		14.0	21.0	23.3	18.0	11.6	12.1
Urban areas	3.53		15.4	24.6	26.1	17.1	9.0	7.8
Rural areas	3.89		12.8	18.0	21.1	18.9	13.7	15.5

Sources: Derived from data given in United Nations, *Demographic Yearbook 1962*, p. 406 ff. and *1963*, p. 710 ff.; *Returns of the Bulgarian Population Census*, Sofia 1966, p. 27; *Statistisches Jahrbuch 1966*, p. 531; *Polish Statistical Yearbook*, 1964, p. 39; *Vestnik statistiki*, No. 7, 1961.

[a] Unlike the data provided elsewhere in this chapter, the distributions shown in this table are based on household as defined by each country for the purpose of population censuses. A comparison of these definitions with those used in connexion wit household income surveys reveals no basic discrepancy, with the possible excep tion of Czechoslovakia, where the "household-housing unit" concept was apparentl applied in connexion with the 1960 Population Census. The use of the latter concep may result in a smaller number of households and a larger average size of househol than if the "housekeeping unit" concept is used.

TABLE 9.6

Poland, 1960 : Distribution of earners by rank, and of households by number of earners

Percentages

Location	A. Distribution of earners by rank			
	First earner	*Second earner*	*Third earner*	*Fourth and above earner*
	All economically active persons			
Total	55.6	30.7	8.8	4.9
Urban	66.3	26.0	4.3	3.4
Rural	46.1	32.9	11.8	9.3
	Same, excluding persons in one-member and one-earner households			
Total	52.2	33.0	9.4	5.4
Urban	61.9	29.0	4.7	4.4
Rural	45.4	35.9	12.8	5.9
	B. Distribution of households by number of earners			
	One earner	*Two earners*	*Three earners*	*Four and more earners*
	All households			
Total	44.8	39.3	10.8	5.1
Urban	60.7	32.8	5.2	1.3
Rural	28.6	45.9	16.5	9.0
	Same, excluding one-member households			
Total	36.6	45.2	12.3	5.9
Urban	53.2	39.2	6.2	1.4
Rural	20.9	50.9	18.2	10.0

Source: Derived from data given in *Polish Statistical Yearbook*, 1964, pp. 32, 39.

0 such earners.[29] Consequently, the pattern of distribu- ion of incomes among households in obviously bound o be much closer to the pattern of distribution of earnings f individual workers in eastern Germany than it is in oland. As a corollary, government measures in the field f remuneration for work will tend to have a greater nfluence on the distribution of household income in the ormer than in the latter country.

The data for Poland summarized in Table 9.6 show the istribution of economically active persons into first, econd, third, etc. earners, and the corresponding distri- ution of households by the number of earners. The umber of second earners is seen to amount to 30.7 per ent of the total of economically active persons, while the umber of third and further earners amounts to 3.7 per cent. These averages do not bring out, however, he considerable difference between wage- and salary- arners, on the one hand, and peasants, on the other, he respective percentages being much higher for the ural than for the urban population. Fitted into the ramework of the household structure, this pattern means hat, among urban households, 60.7 per cent have one arner, 32.8 per cent have two and 6.5 per cent have three or more. Among rural households, the comparable figures are 28.6, 45.5 and 25.5 per cent. These proportions are not much changed by the exclusion of one-member/one-earner households.[30]

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[29] This is after adjustment for the number of households with no conomically active members.

[30] Needless to say, the table serves to indicate global proportions only, and is not representative of the distribution which might be found in other countries. Thus, as indicated in the text, the proportion of households with only one earner is, for instance, higher in eastern Germany than in Poland; exclusion of one-member households will have, on the other hand, a much greater reducing effect. For a more disaggregated level of analysis the following table is of interest. It shows that the participation of the wife in gainful activity tends to decrease as the income of the husband increases. With the exception of childless couples it tends also to decrease with the number of children in the family.

Eastern Germany 1965 : Proportion of families in which the wife earns income from employment (including part-time) in the total of the given group[a]

	Net income of the husband in DM per month					
	Less than 400	*400-600*	*600-800*	*800-1 000*	*over 1 000*	*All households*
All households . .	75	75	68	61	53	70
of which :						
no children . .	71	69	63	54	56	66
1 child	85	82	74	71	57	77
2 children . .	88	78	69	62	52	70
3 children . .	77	74	59	52	46	62

Source: Statistisches Jahrbuch, 1966, p. 452.

[a] The groups include families of workers and employees composed of husband, wife and children, if any, in which the husband is gainfully employed.

9.2 The Effect of the Various Determinants on the Distribution of Family Income

Besides the considerable variations between countries both in activity rates and in the pattern in which the population combines into households, it is clear that the incidence of additional household earners is relatively high in all the centrally planned economies. This in turn reflects the increase in activity rate — particularly of married women — due to the policy of expanding employment as a means of promoting industrialization and economic growth (see also Chapter 7).

Other things being equal, the higher the incidence of additional earners in the family, the further removed is the pattern of distribution of total household income from the pattern of distribution of earners by size of income. However, the living standard of a household depends not only on its combined income, but also on the number of dependants within the family. Families having relatively more earners may also have more members to support, and this reduces the effect of higher incomes. Moreover, since it is the larger families that generally have a larger number of earners, a relatively high incidence of secondary earners in a given economy should tend to reduce the degree of inequality on a *per capita* basis which results from the differentiation of earnings and differences in family size. Although the per capita income indicator carries an opposite bias when taken to represent the relative material welfare of various families, it can hardly be doubted that it provides a better expression for such differentiation than does the total income.[31]

The relationship between the level of wages which a worker receives and the level of his per capita income has been the subject of frequent investigations in the centrally planned economies although unfortunately the terms of reference of these studies often differed from one country to another. It is consequently difficult to prepare even a summary of their results, let alone to relate differences in findings to differences in demographic or other factors governing the transformation of the wage structure into a family income structure. Rather than attempt inter-country comparisons, the following discussion deals only with common findings, treating differences in a cursory way and using statistical material for illustrative purposes only.

In view of the importance of the size factor for the welfare of the family, the relationship between the size of household and the level of per capita income has been studied in the investigations mentioned. More specifically, inquiries were conducted into the impact of the various factors on the per capita income differentiation between families with various numbers of members. Since, as will be shown below, the results throw much light on the differentiation of family incomes in general, the relationship is outlined below.

The influence of family size on the differentiation o incomes

It was observed above that larger families might b expected to have a relatively greater number of earner than small families are likely to have. Table 9.7 show that this relationship does, indeed, hold uniformly i all countries and in all sizes of households. Howeve although the number of economically active person rises steadily with an increase in the number of househol members, the increase is much less than proportional in fact, a sharp decline in the ratio of earners per famil member occurs from the lower to the higher size-classe of households. This tendency for the proportion o earners to decline with an increase in the size of household is by far the most important single factor determining the distribution of per capita income. On the othe hand, as can be seen from the figures for Hungary show below, the proportion of children below working ag rises steeply with the size of the family.

Hungary : Proportion of various categories of dependants in househol

(Number of dependants per 100 household members)

	Number of persons in household					
	2	*3*	*4*	*5*	*6 and over*	*All house-holds*
Young dependants [a]	4	25	40	44	51	32
Old dependants [b]	14	7	5	7	6	7
Dependants of working age	15	17	16	15	14	15
Total	33	49	61	66	71	55

Source: Derived from *Statisztikai Szemle*, No. 7, 1964, p. 764.

[a] Children below 14 years, students and apprentices.

[b] Non-working members, including old-age pensioners in the age group 65 and abov

Since larger households tend to have a relativel greater number of income recipients, but a smaller activit ratio, the question to be considered is whether difference in the average wage per wage-earner between large an small households accentuate or mitigate the inequalitie arising on this score. In turn, the relationship betwee the average wage and the size of the household can b viewed as a function of two other relationships. Th first is the relation between the size of the earnings of th head of the household and the number of people in th family. The second is the relation between the averag earnings of the other gainfully occupied members of th household and the number of people in it.

Both the number of children in the family and th size of the wage of the chief earner being partly a functio of his age,[32] there ought to be — at least up to a certai

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[31] This seems to be particularly true in countries with a low per capita income. The lower the level of real incomes, the higher is the share of expenditure directly related to the number of people in the family such as outlays on food and clothing, and the lower the share of items related to the household as a whole, such as consumers' durables, rent or the maintenance of dwellings.

[32] The extent to which wages tend to increase with the age of th earner can be shown by the following data taken from the Hungaria survey of incomes of engineers, architects and technicians:

Average salary of engineers (head of households) according to age group

Age group	*Salary (in forints)*
20-29	2 214
30-39	3 014
40-49	3 322
50-59	3 389
60 and above	3 301

Source: A mérnökök és technikusok, Statisztikai időszaki közlemények, 1959.

TABLE 9.7

Activity rate per household and household member by size of household

A. Gainfully employed per household
B. Gainfully employed per household member

Country and category	Number of persons in household					
	2	3	4	5	6 and over	All households[a]
Eastern Germany						
All households[b] *(1964)*						
A.	1.67	1.95	1.98	2.16		1.86
B.	0.84	0.65	0.50	0.38		0.61
Hungary						
Wage- and salary-earners *(1960)*						
A.	1.34	1.53	1.56	1.72	1.95	1.50
B.	0.67	0.51	0.39	0.34	0.29	0.45
Poland						
All households *(1960)*						
A.	1.51	1.78	1.90	2.10	2.47	1.92
B.	0.75	0.59	0.48	0.42	0.37	0.48
Urban						
A.	1.35	1.55	1.65	1.77	2.03	1.62
B.	0.67	0.52	0.41	0.35	0.31	0.43
Rural						
A.	1.70	2.05	2.22	2.36	2.62	2.20
B.	0.85	0.68	0.56	0.47	0.39	0.52
Soviet Union						
Wage- and salary-earners *(1959)*[c]						
A.	1.44	1.67	1.88	2.07	2.32	1.77
B.	0.72	0.56	0.47	0.41	..	0.52

Source: Eastern Germany, *Statistisches Jahrbuch 1966*, p. 537; Hungary, direct ommunication from the Hungarian Government; Poland, *Polish Statistical Yearbook*, 964, pp. 32, 39; Soviet Union, Rimashevskaya, *op. cit.*, pp. 32, 40.

NOTE.—Data exclude one-member households and households with no economi-ally active persons.

The average size of household implied in the figures of this table is as follows: Eastern Germany, 3.07. Poland total 4.00, urban 3.72, rural 4.21. Soviet Union, 3.40.

[b] Data pertain to income recipients, and include all households with two or more members.

[c] The figures should be taken as indicative of relationships between various classes of households only and do not lend themselves to international comparison owing to the fact that they were derived from a sample survey considered to be not fully representative (see footnote 2 on page 2 of this chapter).

ize-class — a positive correlation between the earnings f the household head and the family size. The table elow indicates that the earnings of the chief earner in act rise between the low- to medium-size classes of ouseholds. The relationship seems to be the reverse vhen moving from the medium-size to the large-size ouseholds.

The influence of this factor is largely counter-balanced y the other element in the relationship between the ize of average wage and the size of household. Although here is a general tendency for the wage of other family nembers to increase with the level of earnings of the irst earner (see discussion on p. 30 below), in larger ouseholds the greater frequency of second and third arners (who as a rule have lower earnings than the ousehold head) tends appreciably to reduce the average

Relation between the size of the household and the wage level, workers and employees

One-person households = 100

Number of people in the household	*Hungary (1959)*	*Poland*	
	Average wage of all wage-earners	*Average wage of all wage-earners*	*Average wage of the head of the household*[a]
1	100	100	100
2	108	96	100
3	113	109	115
4	115	115	128
5	109	114	120
6 and more	99	107	113

Source: Hungary: direct communication from the Hungarian Government. Poland: *Praca i zabezpieczenie No. 12*, 1963, and *Wiadomosci Statystyczne No. 1*, 1965. The average wage of the head of the household is partly estimated.

[a] From main place of employment.

earnings of the other family members.[33] The effect is, as shown in the table, that the average wage in the largest households is hardly higher than in one- or two-person households. Moreover, a certain tendency is evident for the wage size to increase between small and medium-size households, but it is reversed between the medium- and large-size households.

From the few data published on the relationship between the size of the household and the absolute amount of "non-wage" income,[34] it appears that the latter tends to rise more or less proportionally with the size of family — at any rate from the group of three-member households and upward.[35] Thus, although such incomes do not reduce the spread in absolute terms, they significantly narrow the relative inequality of per capita incomes caused by demographic factors. The effect of this factor can best be analysed on the basis of the available data on the ratio of non-wage income to wage income, in various size-classes of households, presented in Table 9.8. The ratio is seen to rise regularly from one size-class to the next, very large increases occurring not only between the first and second classes but also between the medium and very large households. As might be expected, the compensatory effect of this factor is largest in households with only one wage-earner, and tends to decline with the increase in the number of earners.

Taking Hungary as an example, Table 9.9 provides a summary of the factors determining the differentiation of per capita income between households of different size. It indicates that the relative spread in per capita income between one-person households and households with six and more members is reduced by the effect of the employment factor from 6.7 times to around 3.4 times. It remains unchanged under the wage effect, but it is reduced to 2.8 times under the effect of the incidence of "non-wage" income. The compensatory effect of all income factors taken together tends to rise up to the class of five-member households. The increase is modest, however, so that at its highest the compensatory value of the income factor is smaller than that of the employment factor, even at the level of two-member households.

The fact that per capita income depends so largely on the size structure of the household has, of course, far-reaching consequences in various directions. Thus, differences in household size and structure are an important factor in the differentiation of incomes between socio-

TABLE 9.8

Ratios of "non-wage" incomes to wage income, and the compensatory effect of 'non-wage' income in various size-classes of workers' and employees' households

Percentages and index numbers

Country	All households	Number of persons in household					
		1	2	3	4	5	6 and over
		Percentage ratio of "non-wage" income to wage income					
Hungary *(1959)*	22.3	10.0	18.6	19.1	22.0	29.8	38.6
Poland *(1962)*	17.2	10.5	14.7	14.9	17.0	21.4	29.9
Czechoslovakia *(1959)* [a]	16.2	5.4	10.5	11.7	15.7	22.4	41.8
of which :							
households with							
1 earner	20.0	5.4	13.8	14.8	18.1	28.0	49.6
2 earners	11.9	—	6.0	8.8	13.5	15.6	34.4
3 and more earners	9.0	—	—	2.8	5.7	14.0	11.8
		Compensatory effect [b]					
Hungary	—	100.0	107.7	108.3	110.9	118.1	125.8
Poland	—	100.0	103.8	104.0	105.9	109.9	117.6
Czechoslovakia	—	100.0	104.8	106.0	109.8	116.1	134.5

Source: Direct communication from the Hungarian Government; *Wiadomosci Statystczne No. 1,* 1965; *Zjišťování spotreby a poptavky u obyvatelstva,* Prague 1962, p. 274 ff.

[a] Excluding income in kind from agricultural activities.

[b] Derived as an index of (1+d) where (d) is the ratio of non-wage to wage income

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[33] The considerable impact of the differences in earning power of various earners on average family earnings is seen in the following figures for Hungary:

Average monthly wages in workers' and employees' households with a specified number of earners

	1	*2*	*3*	*4*
In forints	1 660	1 436	1 256	1 173
Index, one-wage family = 100	100.0	86.5	75.7	70.7

Source: Direct communication from the Hungarian Government.

[34] Roughly defined here as incomes other than those appearing as expenditure in the wage-fund account of enterprises, and other than those accruing in kind from the social consumption fund.

[35] However, on a per capita basis such incomes are largest in two-member households, apparently owing to the fact that in such households the spouse, if not regularly employed, has relatively more opportunities for gainful activity. Data on the relationship between the size of non-wage income and the size of family pertaining to Hungary in 1959 are shown below:

	Number of people in household					
	1	*2*	*3*	*4*	*5*	*6 and more*
Non-wage income (monthly per capita *in forints*)	137	184	148	135	153	151

Source: Ibid.

TABLE 9.9

ummary of factors determining the differentiation in per capita income among households of different size, Hungary 1959

Factor	Number of persons in household: 1	2	3	4	5	6 and over
(*a*) Inequality resulting from differences in size of household	100.0	50.0	33.3	25.0	20.0	14.9
(*b*) Inequality resulting from the difference in size of employment	1.00	1.34	1.52	1.57	1.72	1.95
(*c*) Total inequality resulting from demographic factors (*a* . *b*)	100.0	67.0	50.6	39.3	34.4	29.1
(*d*) Compensatory effect of differences in average wage	1.00	1.08	1.13	1.15	1.09	0.99
(*e*) Inequality in per capita wage income (*c* . *d*)	100.0	72.4	56.9	45.1	37.6	28.7
(*f*) Compensatory effect of non-wage income	1.00	1.08	1.08	1.11	1.18	1.26
(*g*) Total inequality in per capita income (*e* . *f*)	100.0	78.0	61.6	50.0	44.4	36.1
(*h*) Total compensatory effect of differences in income (*d* . *f*)	1.00	1.17	1.22	1.28	1.29	1.25

Source: Derived from figures supplied by the Hungarian Government.

conomic strata of the population.[36] For instance, as own by the figures in Table 9.10, in Czechoslovakia nd Hungary the average money income per collective rm household exceeds the country-wide average owing a relatively high number of earners per household. ut the per capita income of this population group is nly 90 per cent of the country-wide average in both ese countries, reflecting a higher than average household size. In employees' households the number of earners is higher than in workers' households, and in Czechoslovakia this accounts for a large part of the difference in the level of household income between the two groups; the average salary is only slightly higher than the average wage, and the effect of "other" income is to narrow the differential between them. The inequality in income level increases, when reckoned on a per capita basis, from 6 per cent to around 13 per cent, as a result of the greater average size of workers' households. The opposite relationship obtains for households of pensioners and self-employed persons, where — owing to the relative size of such households — per capita income is closer

TABLE 9.10

Average money incomes and household sizes by socio-economic groups

Index numbers and ratios

Group	Czechoslovakia (1963) (a)	(b)	(c)	(d)	Hungary (1962) (a)	(b)	(c)	(d)
	(country-wide average = 100)				(country-wide average = 100)			
Workers and employees	..	..	..		113.9	106.4	3.40	1.67
Workers	112.2	101.3	3.53	1.57	..	..	..	
Employees	118.9	114.1	3.48	1.63	..	..	..	
Collective farmers	104.0	90.8	3.55	1.87	101.2	91.6	3.51	2.21
Pensioners	60.4	86.4	1.81	0.24	54.5	83.8	2.06	0.42
Self-employed	..	..	..	..	81.4	89.1	2.90	1.59

Key: (a) Income per household.
(b) Income per capita.
(c) Average number of people in household.
(d) Number of gainfully occupied people in household.

Source: Statistike, No. 8, 1965, p. 338; direct communication from the Hungarian Government.

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[36] The classification of households by socio-economic groups is, a rule, based on the type of income earned by the head of the ousehold, the "head" being determined by the surveyed family ee footnote 28 on p. 10).

TABLE 9.11

Per capita income in different size-classes of households, by socio-economic groups

One-member household = 100

Country and group	Number of people in household: 1	2	3	4	5	6 and over
Czechoslovakia (1960)						
All categories	100	99	96	82	71	58
Workers	100	79	65	54	45	40
Employees	100	81	66	54	48	40
Co-operative farmers	100	88	83	74	65	56
Private farmers	100	81	85	71	62	49
Pensioners	100	104	119	111	91	77
Self-employed	100	68	76	93	61	51
Unclassified	100	127	125	128	119	76
Hungary (1962)						
All categories	100	89	84	70	63	52
Workers and employees	100	81	66	54	48	39
Co-operative farmers	100	81	73	60	57	49
Self-employed	100	72	69	58	52	45
Pensioners	100	91	103	95	81	67

Source: Czechoslovak Statistical Yearbook, 1962, p. 374; direct communication from the Hungarian Government.

to the country-wide average than is the level of total household income.[37]

Table 9.11 shows that, in practically all the socio-economic groups distinguished, the level of per capit income declines sharply with an increase in the size o the household, but that there are also considerabl differences in the rate of decline. The decrease is steepe in the wage- and salary-earners' group than in the collective-farmers' group. It is least pronounced in the grou of pensioners and not much greater in families of self employed persons. These differences reflect variation in the activity rate within the family, the opportunity for women and children to contribute to famil income being, for instance, much greater amon

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[37] The relatively high average per capita income in pensioners' households is explained to a large extent by the fact that households whose head is a pensioner often have other gainfully occupied members, and to a lesser extent by the fact that the pensioners themselves sometimes continue to work (see footnote 16 on p. 7). The proportion of incomes other than pensions in the total income of pensioners' families amounted, for instance, in Czechoslovakia in 1958 to 40 per cent (see V. Sova, *Diferenciace v prijmech obyvatelstva*, Prague 1964, p. 208). Of this additional sum around 35 per cent were wages and 4 per cent income in kind derived from agricultural activities.

TABLE 9.12

Relative importance of main and secondary sources of income in workers' and collective-farmers' families, by size of household, Hungary 1962

Forints and percentages

Size of household	Total monthly income (forints)		Percentage distribution by sources					
			Wage-earners			Collective farmers		
	Wage- and salary-earners	Collective farmers	Wages	Agricultural incomes	Others[a]	Wages	Agricultural incomes	Others[a]
1	1 511	1 187	89	2	9		95	5
2	2 442	1 929	85	8	7	4	93	3
3	3 004	2 593	86	8	6	13	83	4
4	3 283	2 831	82	11	7	13	82	5
5	3 607	3 394	75	13	12	18	76	6
6 and more	3 922	3 868	70	15	15	23	71	6
Average	2 974	2 643	82	10	8	13	82	5

Source: Direct communication from the Hungarian Government.

[a] Residual item including pensions, family allowances, occasional incomes, income from property, etc.

rmers than among persons living on wages and laries.

In a number of countries the stream of agricultural come tends to counter-balance to some extent the fect of family size on the per capita incomes of wage-rners; and the analogous effect is still greater in respect f the wage incomes of collective-farmers' households. he data relating to Hungary in 1962 in Table 9.12 show at the share of agricultural incomes increases with the ze of workers' households (and with the decrease of ombined per capita incomes), and that this share creases more quickly than that of the remaining com-onents of income (mainly social benefits in cash). The ame is true of wage incomes earned by collective-rmers' households.

The relationships shown in the table reflect the fact at larger households have more opportunities for ombining agricultural with non-agricultural activities.[38] he very high positive correlation between the size of ollective-farmers' families and the share of wages in tal incomes is because one or more of the regular earners" of large families take up employment as wage-rners (outside or within agriculture) for part of the ear. In other words, while the labour reserves of non-egular "earners" (women, aged people, older children) re used for agricultural activities, part of the regular bour force (mainly young people) is diverted from ollective-farm work for more or less long periods. evertheless, their contribution generally attenuates the come gap between large and small families in much the ame way as do agricultural incomes in the case of wage-rners' families.

In tabulating the results of the 1962 income census, an ttempt was made in Hungary to produce data per consumption unit". These units were so designed as take into account not only the age structure of the amily but also overhead expenditures.[39] The calculations er capita and per consumption unit are compared in able 9.13, from which it appears that the inverse relation weakened in the data referring to consumption units, ut that it persists both globally, and for wage-earners nd collective farmers separately.

TABLE 9.13

Index numbers of combined family income per capita and per consumption unit, Hungary 1962

One-member household = 100

Size of household by number of members	Combined family income					
	Per capita			Per consumption unit		
	All house-holds	Wage-earners	Collec-tive farmers	All house-holds	Wage-earners	Collec-tive farmers
1	100	100	100	100	100	100
2	89	81	81	95	92	91
3	84	66	73	94	83	88
4	70	54	60	83	72	77
5	63	48	57	76	66	76
6 and more . . .	52	39	49	65	55	68

Source: A népesség jövedelmi helyzete, 1962, Budapest 1964, p. 18.

he interplay of the various factors in the differentiation of per capita incomes

The foregoing discussion of the relationship between arious determinants of differential levels of per capita come between various sizes of households can be ummarized as follows. A strong positive correlation was found between family size and total combined family income, and a strong negative association between family size and its income level, whether measured by per capita income or by income per consumption unit. The connexion between total family income and family size is due to the fact that larger families have a greater number of "regular" income recipients, and also have more opportunities for obtaining auxiliary income — partly because they are better placed to engage in outside activities, and partly because the family allowance system provides certain additional income to such families. These factors, while to a certain extent reducing the inequality that naturally results from differences in the number of people a family has to support, by no means abolish such differences. The net — and not implausible — outcome is that small households are much better off than large households.

The interplay of the various factors in the formation of differentials as between households belonging to various per capita income groups remains to be examined. Even superficial inspection of the composition of incomes of families at various levels of per capita income reveals regularities indicating certain inter-relationships accompanying the differentials. One such regularity, visible in Table 9.14, is that the share of income from employment in workers' and employees' families tends to be larger in higher than in lower per capita income households, whereas the share of "non-wage" income tends to be smaller. Within the latter category, the decrease in government transfer payments — family allowances, pensions, etc. — is particularly steep, but it is also significant in respect of auxiliary farm income. The remaining component of this category (comprising various miscellaneous incomes) shows little systematic variation from one per capita income group to another.

Another regularity of the same type is that the proportion of *income contributed by working members* other than the head of the household tends to rise with the increase in the per capita income class, while, in most of the intervals, the share contributed by the head tends

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[38] In the case of wage-earners' households this is also because the verage size of households is larger and the wage-income smaller rural localities where there is more scope for utilizing the labour eserves of the family in agricultural activities.

[39] This was achieved by adding 0.2 units to the head of each ousehold. Thus, the following coefficients were used in the computation:

Head of household (or one person household)	1.2 units
Earners and dependants of working age	1.0
Dependants above working age	0.7
Children : 0-3 years	0.4
4-6 years	0.5
7-10 years	0.6
11-14 years	0.8

TABLE 9.14

Structure of incomes of workers' and employees' households, by per capita income group

Country and source of incomes	Income group[a]		
	I	II	III
Hungary (1959)			
Wage income	72.9	85.8	88.1
Family allowances and pensions, etc. .	12.8	5.7	3.4
Auxiliary farm income	10.0	4.7	2.4
Other income	4.3	3.8	6.1
Poland (1962)			
Wage income	75.3	85.4	89.3
of which :			
head of household[b]	60.5	57.1	62.4
other members	14.8	28.3	26.9
Family allowances, pensions, etc. . . .	18.7	8.9	4.1
Other income	6.0	5.8	6.6
Rumania (1962)[c]			
Wage income	76.8	82.4	85.0
of which :			
head of household	73.2	67.5	52.8
other members	3.6	15.0	32.3
Family allowances, pensions, etc. . . .	12.3	8.0	5.9
Other income[d]	10.9	9.6	9.1

Source: Direct communication from the Hungarian Government; *Polish Statistical Yearbook*, 1963, p. 449; S. Taigar, *Veniturile populatiei si nivelul de trai in R.P.R.*, *Editura politica*, Bucharest 1964, p. 188.

[a] In Hungary and in Poland, Group I covers families with per capita incomes of up to 800 forints or zlotys, respectively, per month; Group II between 800 and 1,500; and Group III above 1,500 forints or zlotys. No information is available as to the coverage of the various groups in Rumania.

[b] From main place of employment.

[c] Workers only, averages for 3- and 4-member households.

[d] Probably including the material component of unpaid services.

to decline. The tendency changes only in the segment covering well-to-do households, where the proportion of income contributed by the head again rises. Nonetheless, the difference, between the extreme per capita income groups, in the share of the household head varies in the Soviet Union between 57 and 77 per cent.[40] Although the range is apparently smaller in most other countries, this still indicates how important the availability of a second (and third) earner in the family is as a factor in determining the level of per capita income.[41]

Given the strength of family size and structure a
determinants of its per capita income level, the questio
arises whether there is any systematic *relationship betwee*
per capita income and wage size. Studies of this relationship have generally reached the conclusion that the average wage per earner tends to be significantly higher i
better-off families than in those with low incomes. Th
increase in wage level is not, however, uniform for a
sizes of households, and tends to be greater in smalle
than in larger families, indicating a higher degree c
association with per capita income for the former tha
for the latter. Nonetheless, the correlation between th
wage size and the per capita income of the household t
which a given earner belongs has been found to be weak
This finding is in contrast with the correlation foun
between the per capita income of a given household an
its size.

Some data on the relationship between wages and pe
capita income are presented in Table 9.15. The associatio
between the level of wages and the per capita income i
apparent, but a great number of better paid workers ar
also seen to belong to households with relatively low pe
capita income, and *vice versa.* In the Soviet Union, fo
instance, about 32 per cent of all workers and employee
belonging to households in the second to lowest incom

TABLE 9.15 A

Soviet Union, 1959 : Distribution of workers and employee in various classes of per capita income household by wage size

Per capita income group	All workers and employees	Wage size category						
		A	B	C	D	E	F	G
I.	100	17	33	13	20	11	5	1
II	100	6	21	16	25	16	13	3
III	100	4	16	12	25	20	17	6
IV	100	2	12	9	20	20	25	12
V	100	2	9	7	13	19	26	24
VI	100	2	7	5	9	9	22	46

Source: Rimashevskaya, *op. cit.*, p. 38.

TABLE 9.15 B

Poland, 1962: Distribution of heads of workers' an employees' households in various wage classes by households with different levels of per capita income

Wage size category	All heads of households	Per capita income group						
		I	II	III	IV	V	VI	VII
A	100.0	11.9	30.5	11.9	27.1	13.6	5.0	—
B	100.0	8.1	18.4	21.3	18.6	16.5	14.4	2.
C	100.0	8.9	15.9	18.6	23.0	11.2	14.0	8.
D	100.0	6.5	18.5	23.2	16.8	12.7	11.5	10.
E	100.0	0.8	7.5	19.3	28.4	16.4	18.8	8.

Source: Wiadomosci Statystyczne, No. 1, 1965.

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[40] Cf. Rimashevskaya, *op. cit.*, p. 29. The figures relate to a more detailed group classification (greater number of classes) than that shown in Table 9.14.

[41] The importance of earnings other than those of the head of household in determining income distribution can, of course, be seen from the proportion of the total accounted for by such incomes in the various countries. This can be illustrated by the following figures *(percentages)*:

	Poland (1962)	*Soviet Union (1958)*
Share of wages		
in total income	85	93
of which :		
head of the household	59	61
other members	26	32

In Rumania the importance of earnings other than those of the head of household is apparently relatively lower than in Poland, judging by the data in Table 9.14.

ass earned wages in the three highest categories. Conver- ly, about 18 per cent of those belonging to households the second to highest income class had wages falling to the three lowest categories. The correspondence etween wages of the household head and per capita come is even smaller, as indicated by the Polish data.

Following the method of presentation used earlier, ables 9.16 and 9.17 can serve to illustrate the interplay f the various factors in differentiating per capita incomes etween households in diverse income categories. As ight be expected, differences in per capita income etween classes largely reflect differences in the size of e household. In both countries for which data are vailable, Hungary and Poland, the size of the household eclines uniformly with the increase in the per capita come class. The spread between the highest and the owest per capita income group in the household size as 3.1 times in Hungary and as much as 5 times in oland, in both cases the range of variation being larger an that in any other determinant of the per capita come level. Differences in wage level — whether in the age received by the head of household or by other embers — although also significant, show a smaller ariation, the spread in the average family wage between e extreme classes of household amounting in Hungary 2.5 times, and in Poland to nearly 2 times.

The *number of wage-earners per household* shows a till smaller variation. In both of the countries included Table 9.16, the number of earners per household tends to increase between the low- and the middle-income groups — which accounts for part of the differential between these classes. The number tends to decline between the medium- and higher-income brackets, when the effect of the employment factor is to narrow the gap in per capita incomes. This implies that, although the number of earners per household generally tends to be higher in larger than in smaller families, there are still many large families with only one earner, and that these constitute a large segment of the low-income class households. On the other hand, the presence of an additional earner in the family makes the difference that some large families are able to move up into the middle-income groups, and smaller families with two earners often find themselves in the higher than middle groups. This results — as can be seen from the table — in a high concentration of multi-earner families in the middle- to high-income groups, characterized by relatively high indices of employment.[42]

Thus, it is only the incidence of income from other sources than employment which — as can be seen from Table 9.17 — moderates the spread of income distri-

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[42] The data for Poland indicate that the high incidence of supplementary earnings is not reflected there in a reduced effect of the level of wages other than of the head of the household. The latter level varies somewhat irregularly under the influence of fluctuations in the employment index and of the tendency for the average earnings of the other family earners to increase with the level of earnings of the first.

TABLE 9.16

he effect of various factors on the differentiation of per capita wage income among workers' and employees' households classified by size of per capita income[a]

	Per capita income category[b]							
	VIII	VII	VI	V	IV	III	II	I
ungary (1959)								
1. Differences in the size of household[c]	100.0	79.8	66.7	57.9	51.6	45.0	39.0	32.2
2. Differences in employment	100.0	112.1	114.1	116.0	109.0	99.7	88.1	83.1
3. Differences in average wage	100.0	80.9	70.7	66.9	63.1	59.0	52.0	38.7
4. Total inequality in per capita wage income (1.2.3.)	100.0	72.4	53.8	45.0	35.4	26.5	17.9	10.3
oland (1960)[d]								
1. Differences in the size of households[c]	100.0	65.2	51.4	42.6	35.8	30.5	26.4	20.1
2. Differences in employment	100.0	133.0	137.8	138.1	138.4	123.3	106.8	118.4
3. Differences in average wage	100.0	78.2	75.4	74.7	69.4	68.0	65.5	52.0
of which : Average wage of the head of household[e]	100.0	81.8	79.5	80.9	75.7	72.4	65.5	53.3
4. Total inequality in per capita wage income (1.2.3)	100.0	67.8	53.1	43.7	34.2	25.6	18.4	12.2

Source: Polish Statistical Yearbook, 1961; *Praca i zabezpieczenie spoleczne*, o. 12, 1963; and direct communication from the Hungarian Government.

The relationships depicted in this table can be summarized by means of the formula:

$$\frac{1}{\frac{L_n}{L_1}} \cdot \frac{K_n}{K_1} \cdot \frac{A_n}{A_1} = \frac{R_n}{R_1} \cdot \frac{L_1}{L_n} = \frac{\overline{R}_n}{R_1}$$

where

L = number of persons in the household
K = number of earners in the household
A = the average wage per wage-earner
R = total wage-earnings
$\overline{R}$ = per capita wage earnings

and the subscripts (1) and (n) denote, respectively, the highest and the other per capita income groups.

[b] Ranked left to right from highest to lowest.

[c] Reciprocal of index of household size.

[d] The actual classification was according to per capita expenditure.

[e] From main place of employment.

TABLE 9.17

The compensatory effect of "other" incomes

Country and component of income	Per capita income category[a] VIII	VII	VI	V	IV	III	II	I
Czechoslovakia								
1. Wage income per capita [b]	100.0	73.3	60.6	52.4	44.6	38.8	27.8	18.5
2. Total income per capita	100.0	73.7	58.9	54.0	46.7	41.1	30.9	26.8
3. Compensatory effect of "other" income [b] (2 : 1)	100.0	100.5	97.2	103.1	104.7	105.9	111.2	144.9
Hungary								
1. Wage income per capita	100.0	72.4	53.8	45.0	35.3	26.5	17.9	10.3
2. Total income per capita	100.0	68.8	52.7	44.7	36.4	28.4	20.6	13.3
3. Compensatory effect of "other" income (2 : 1)	100.0	95.0	98.1	99.4	103.1	107.2	115.3	128.7
of which : State cash benefits	100.0	100.6	102.6	103.4	105.2	107.0	111.1	125.5
Poland								
1. Wage income per capita	100.0	67.8	53.1	43.7	34.2	25.6	18.4	12.2
2. Total income per capita	100.0	66.9	53.2	44.0	35.4	27.9	20.9	15.1
3. Compensatory effect of "other" income (2 : 1)	100.0	98.7	100.2	100.8	103.6	109.0	113.8	123.8
of which : State cash benefits	100.0	101.6	103.2	104.5	107.3	112.2	116.8	129.4

Source: Zjišťování spotreby, op. cit. p. 272 ff.; *Polish Statistical Yearbook*, 1961; direct communication from the Hungarian Government.

[a] Ranked left to right from highest to lowest.

[b] Excluding income in kind from agricultural activities.

bution through all classes of per capita income. Significantly, the compensatory effect of such income is strongest in the region where it is needed most — at the lower end of the income-distribution scale. This effect is mainly due to state welfare payments, the contribution of other incomes to reducing the differentiation between incomes classes being apparently smaller.[43] It should be added, though, that although the index measuring the effect of state welfare payments invariably rises as the per capita income class declines (thus recording diminishing inequality in each class), the compensation is relative rather than absolute. The variation in the absolute amounts of state transfers accruing per member of the family in various classes of per capita income appears to be rather small in most countries, except in the Soviet Union, where it was found to enlarge appreciably the gap between various income classes.

This observation leads to the question of the extent to which *social benefits in kind*, such as free health and education services, alter the picture. Since such benefits are provided on the basis of individual needs or demand, they ought to favour the lower income groups more. It would then follow that the higher the share of such benefits in the total, the greater the compensatory effec of social expenditure taken as a whole is likely to be

The presumption that the compensatory effect o social benefits provided in kind is much higher than o those provided in cash was confirmed in a study undertaken by Moscow University in 1960. The results of thi study, reproduced in Table 9.18, indicate that (unlik benefits related to employment) the absolute amoun of benefits accorded independently of employment decreases steeply with an increase in per capita income At the lowest income level over one-half of the benefit received consist of services provided in kind, at the highes level they amount to only some 25 per cent. Despit this effect, the absolute value of all benefits receive still tends to be greater in the higher income brackets – with the exception of the very highest bracket.

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[43] Particularly in countries where income from agricultural activities does not provide a large share of the budgets of workers' and employees' households. In Hungary, however, the compensatory effect of such incomes was reported to be higher than that of social benefits. See the findings in connexion with the Hungarian "model" discussed below.

[44] Among these benefits, those in Category III are particular closely related to the number of children in the family, as shown b the following figures:

Per capita combined family income (roubles per year)	Average family size	Number of families (per 100 families) receiving some benefit for upbringing and education of children: Children's allowances	Kindergarten subsidy	Children's holidays subsidy	Educatio
241-360	4.3	23.8	25.4	23.8	61.8
361-480	3.6	10.1	25.6	14.9	47.0
481-700	3.2	3.4	17.9	10.4	30.2
701-840	2.3	2.5	8.3	1.8	15.7
840+	2.0	—	5.1	—	6.3

Source: V.F. Mayer, *Zarabotnaya plata v period perekhoda k komunizmy*, Mosc 1963.

As was noted earlier, wage differentials may sometimes e attenuated or even eliminated by variations in family ze and/or activity rates, while in other cases they may e increased by the inter-play of these factors. In the ajority of cases, very low wages were received by age-earners who are either single or secondary family arners, and higher wages are enjoyed by wage-earners ho are heads of households and sometimes of large nes with low employment ratios. However, there are lso many cases when fairly low wages are received by eads of large families where there are few or no other arners, while relatively high salaries are earned by ngle people, or two high salaries are combined by ouples with no children. This results in the appearance t one end of the spectrum of a not unimportant category f "hardship" households, and, at the other end, of a roup of affluent households.

TABLE 9.18

elation between the per capita income level of households and the amount of all social benefits received[a]

Annual money ncome per capita in roubles	Total annual value of benefits per capita in roubles	Benefits dependent on employment		Benefits independent of employment			
		Category I		Category II		Category III	
		Roubles	percentage	Roubles	percentage	Roubles	percentage
Jp to 300 . .	178	58	31.5	37	20.3	83	48.2
01-420 . . .	185	68	36.9	44	23.6	73	39.5
21-600 . . .	190	94	49.2	31	16.4	65	34.4
01-900 . . .	232	142	61.2	30	12.9	60	25.9
)ver 900 . .	169	109	64.5	20	11.8	40	23.7

Source: Vestnik Moskovskogo Universiteta, Vol. VIII, No. 2, 1965.

The data are based on a sample of 746 families of workers engaged in six industrial enterprises in the Ivanovo region. Category I covers sickness benefits, pensions, etc. Category II covers family allowances, the upkeep of nurseries, housing subsidies, etc. Category III covers the value of health and education benefits.

The Hungarian income survey provides information n the size composition of households with a per capita ncome of less than 400 forints (or of less than one-ourth of the average wage), which is taken as a demar-ation line for the group falling into the "hardship" ategory. This group, as seen from the table below, ncludes roughly equal proportions of small households, vhere the small wage or pension of the head of the ousehold is the decisive factor, and of large households, vhere high dependency ratios prevail. Consequently, melioration of the lot of this segment of the population vould require a number of measures of a different haracter: improvement of very low pensions,[45] higher amily allowances,[46] and possibly specific measures of a velfare character.

The problem of relatively small households whose ead earned a low wage was particularly acute in the Soviet Union for many years after the war. As a result of the heavy toll taken of husbands and fathers during the war, a great number of women had to take up employment — very often as the only breadwinner. Since they as a rule joined the labour force without any training, they most often entered wage categories which were barely sufficient to support a single person, let alone families. It was only when qualifications were slowly acquired, or — perhaps more important — dependants reached the age of maturity, that the problem of this hardship category was resolved.

Distribution of households with less than 400 forints combined per capita income, by size and socio-economic groups, Hungary 1962

Classification of head of household	*Share of households in total (percentages)*	*of which: 1-3 members*	*4 or more members*
Total :	100	49	51
of which :			
Pensioners and not-gainfully employed	30	27	3
Agricultural workers	23	6	17
Unskilled workers and clerical assistants.	13	3	10
Skilled workers . .	11	2	9
Occasional workers, day labourers . .	7	4	3
Others	16	7	9

Source: 1962 micro-census, p. 29.

Assuming, very arbitrarily, that very high per capita incomes are those ten times above the maximum limit of the "hardship category" (or 2½ times above the average wage), this group was shown to include in Hungary:

(*a*) a small number of highly paid people, irrespective of the size of their households (e.g. successful artists, writers, scientists, high-level administrators and managers, etc.);

(*b*) other wage-earners with earnings in excess of 2½ times the average wage, either from the main employer or through combination of several incomes, *provided* they have no, or very few, dependants (e.g. engineers, technicians, miners, highly skilled workers in priority branches, high-level administrators and other intellectuals);

(*c*) peasant households in very well-located and successful farms, mostly with a favourable age-structure and a low dependency ratio;

(*d*) a small proportion of self-employed, or of households engaging in quasi-legal activities in the private sector.

While the existence and composition of group (*a*) is in accordance with official income policies, accession to group (*b*) depends on other factors such as marriage to a person with high earnings, preference for a small family, and ability to find second jobs or secondary occupations. Group (*c*) is to a large extent the product of differential rent. Finally, the existence of group (*d*) is partly the consequence of deficiencies in the supply of services and in the distribution of goods by the socialist sector, and is therefore unlikely to be eliminated by administrative action alone or even by fiscal measures.

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[45] Some measures were taken in Hungary recently to increase hem.

[46] Family allowances for two children were increased in 1965.

The weak link between the wage size of individual earners and their family's standard of living calls in question the equity of the prevailing system of personal taxation. As mentioned earlier, taxes are levied in all the centrally planned economies on the basis of the wage size, little differentiation being made in most countries for the family conditions of the earner. In these circumstances, the impact of wage taxes may well be to reduce the degree of differentiation of earnings, but not necessarily also the differentiation in per capita income.[47]

Reasonably exact knowledge of who benefits, and by how much, from any measure raising the income of the population is a *sine qua non* for planning. An example of the relevance of this knowledge for the efficient implementation of an income policy was given in the Soviet study quoted above. The study assumes that the planners can afford to increase per capita family income by *x* roubles per year, and that the objective of policy is to narrow the spread of family incomes. The relative gains of families in these income groups would then be a follows, depending on the measure chosen:

Income group	*Increase in average wage*	*Increase in minimum wage*	*Reduction of food prices*	*Expansion of total social fund*	*Expansion of social benefits independent of employment*
All families	*100*	*100*	*100*	*100*	*100*
Low income group .	15	41	26	34	57
Medium income group	31	45	34	39	39
High income group . .	54	14	40	27	4

Source: Vestnik Moskovskogo Universiteta, vol. VIII, No. 2, 1965.

Thus, if the *x* roubles were used for an increase i average wage, most of the increment would go to the highest income group. If the sum were used fo increasing the minimum wage, the main beneficiarie would be families in the medium- and lower-income groups. The cut in food prices is least efficient;[48] and an increase in all social benefits would give more to the medium- than to the lower-income group. By far the best results would be obtained by using the additiona funds for the expansion of those social benefits which are independent of employment (Categories II and II in Table 9.18). Of every extra rouble spent on such benefits, more than 50 kopeks go towards increasing the incomes of the worst-off families and only 4 kopeks to the relatively well-off. This leads the authors of the study to conclude that a policy of raising the wage minimum and of lifting the tax-free wage-limits would not, given the objective, yield the best results.

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[47] A Polish study of this question concluded that the rate of taxation increases with the level of the per capita income classes. However, in many cases smaller families in higher per capita income brackets are taxed at a lower rate than are larger families who are less well off (see *Praca i zabezpieczenie spoleczne*, No. 12, 1963). But it must also be remembered that price relatives generally favour large families, as prices of such items as children's clothing and shoes, school supplies, toys, etc. carry little or no tax and often include a subsidy.

[48] This greater gain in absolute terms should not be identified with the effect of rising inequality in relative terms; for the latter the converse is true.

9.3 The Pattern of Income Distribution

The factors making for the transformation of the distribution of individual earnings into the distribution of combined family incomes work, as was seen, in various directions. Some of them tend to augment, and others to reduce, the scope of differentiation, although those that tend to widen income inequality seem, by and large, to predominate (at least when transfers in kind are omitted).

The differentiation in the distribution of total household income appears generally to be larger than the differentiation in the distribution of incomes among individual recipients. The coefficient of variation of the distribution of workers and employees by the size of earnings in the population of earners entering the Soviet 1958 microcensus was reported to have been significantly smaller than the comparable coefficient for the distribution of households by the size of income.[49] A similar difference is indicated in Table 9.19 for the corresponding distributions for Hungary. The data for eastern Germany are less conclusive, but there, too, the spread in the distribution of households appears also to be wider than the spread in the distribution of earners.

Closer examination of the data for these two countries reveals that differences in the distribution of workers and employees by the size of earnings, and of workers and employees' households by total income, are concentrated mostly in the region below the median. Thus, the wider dispersion of total household incomes occurs mainly at the lower end of the distribution scale, indicating that there are enough families with one earner which lose ground in relation to those having two or more earners to extend the distribution significantly in this direction.

To the extent to which there is a positive correlation between the income of the family and the number of people in it, the inequality in per capita income distribution should be smaller than the inequality in total income distribution. On the other hand, there are apparently enough small families with a higher than average income to extend the per capita income distribution in the upper direction, as indicated by the data presented in the same table for Hungary. The figures bring out two important facts: there is, on the one hand, no significant difference between the distribution of households by per capita income and the distribution of household members by the size of their income. There are, on the other hand

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[49] Rimashevskaya, *op. cit.*, p. 38.

TABLE 9.19

Ratio of deciles of incomes (or earnings) to the median of the given distribution, and quartile ratios

Decile	Hungary						Czechoslovakia		Eastern Germany			Poland	
	Workers and employees by earnings (1959)	Workers' and employees' households by total income (1962)	Member of workers' and employees' households by per capita income		Workers' and employees' households by per capita income (1962)	Income per consumer equivalent unit (1959)	Workers and employees by earnings (1959)	Workers' and employees' households by per capita income (1958)	Workers and employees by earnings (1959)	Workers' and employees' households by total income		Workers' and employees by earnings (1962)	Members of workers' and employees' households by per capita income (1962)
			(1959)	(1962)						(1959)	(1964)		
Top 5 per cent	1.89	1.91	2.13	2.07	2.08	1.91	1.77	1.96	1.86	1.88	1.79	..	2.38
Top decile	1.61	1.65	1.80	1.75	1.76	1.66	1.53	1.65	1.58	1.59	1.55	1.76	1.91
Second decile	1.40	1.38	1.47	1.46	1.45	1.40	1.32	1.42	1.33	1.36	1.34	1.44	1.53
Third decile	1.22	1.25	1.28	1.28	1.26	1.23	1.19	1.25	1.23	1.22	1.21	1.25	1.29
Fourth decile	1.10	1.11	1.12	1.14	1.12	1.11	1.09	1.11	1.09	1.11	1.11	1.11	1.13
Fifth decile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sixth decile	.92	.90	.89	0.90	.88	0.91	0.91	0.90	0.93	0.88	0.91	.88	0.87
Seventh decile	.82	.78	.78	0.80	.78	0.82	0.83	0.81	0.84	0.79	0.79	.79	0.77
Eighth decile	.73	.65	.67	0.68	.66	0.72	0.73	0.71	..	0.67	0.68	.69	0.67
Ninth decile	.62	.50	.55	0.54	0.53	0.61	0.63	0.60	..	0.54	0.55	.56	0.53
Quartile ratio	1.67	1.85	1.87	1.86	1.85	1.71	1.62	1.75	1.60	1.75	1.70	1.82	1.91

Source: The deciles were obtained by straight-line interpolation of the logarithms of the cumulative shares and the corresponding income classes. The basic figures were taken from the following sources: direct communication from the Hungarian Government; M. Mod (Editor), *The Standard of Living*, Budapest 1962, pp. 196 and 220; V. Sova, M. Dobnalova, S. Peca and V. Teichman, *Diferenciace v prijmech obyvatelstva*, Prague 1964, p. 66; *Czechoslovak Statistical Yearbook*, 1963; *East German Statistical Yearbook*, 1965, p. 436; *Volkswirtschaftsplanung*, Heft 14, Berlin 1963, p. 156; *Polish Statistical Yearbook*, 1963, p. 430; *Wiadomosci Statystyczne No. 7*, 1966.

significant differences between these two distributions and the distribution of households by the size of total income. The distribution of per capita incomes is more widely dispersed than the distribution of total household income at the top of the income scale, but it is less so at the bottom.

The latter effect notwithstanding, the per capita distribution of workers' and employees' incomes shows a considerably wider dispersion in Hungary than the distribution of individual earners. The same situation as indicated in the table prevails in Czechoslovakia and Poland. In Hungary, significant differences in the distribution appear at both ends. In Czechoslovakia and Poland, it is only at the top of the income scale that per capita incomes are much more widely dispersed than individual earnings.

For reasons pointed out earlier, both the distribution of households by total income and the distribution of per capita incomes are inadequate measures of the true differentiation in living standards. When the analysis is conducted on the basis of total household income, large families fall into income groups representing a higher living standard than they actually have, while the living standard of smaller families is relatively understated. Thus, the general picture appears to be better than it really is. When the analysis is conducted on the basis of per capita income, the picture becomes less favourable than reality, since the actual living standard of large families is higher than indicated by their relative per capita income. It is for this reason that attempts to make allowance for the family needs in some systematic way are of considerable interest.

The results obtained in Hungary from such an attempt are shown in column 6 of Table 9.19. The distribution of incomes per consumer-equivalent unit is seen to be less widely dispersed than the distribution of per capita income. For reasons which cannot be easily explained, the dispersion is also narrower than that of total household income.

For lack of data, it is not possible to discover to what extent the picture would be altered if allowance were made for the incidence of taxation and of benefits in kind. An adjustment for direct taxation would apparently have a negligible effect, but an allowance for benefits in kind could well alter the picture significantly. This is particularly true in respect of the per capita income or per consumer-unit distribution, the inequality of which would tend to be reduced. An effect of this type would also result if family expenditure — rather than family income — were taken as a basis for comparison.

Income distribution is the outcome of the inter-action of numerous and complex factors. Despite this, or perhaps because of it, acknowledged practice in economic investigations has been to search for some regularity in the pattern of various distributions. The interest of some research workers has centred on finding a mathematical expression to describe some "law" of income distribution. Other theories have been constructed on the principle that no abstraction can be made from the diverse economic conditions prevailing in different countries, or at different times, inasmuch as precisely these conditions produce various and changing distributions given the major role played by the institutional and socia framework in influencing and regulating the shape o income distribution, it is argued, there can be no plac for a general "law" of distribution. Nonetheless, thi approach does not rule out the possibility that the combined effect of different factors, including state regulations may result in a pattern of income distribution that lend itself to description, for analytical purposes, by means o a mathematical relation. Nor does it exclude the probability that, within any given institutional setting, th character of these distribution functions may remain th same, with only the parameters changing in response t changes in the impact of some determinants.

Plainly, the discovery of such statistical regularitie of distribution could be a considerable advantage fo planning. Once the type of mathematical function describing the distribution of income is known, it is possibl to forecast future distribution more readily by referenc to planned changes in the parameters of the distribution.[5 Furthermore, by examination of the parameters of th function describing distribution, it is possible to revea economic relations which cannot, or can only with difficulty, be approached by other methods.[51]

It was thus natural that, as income planning came t the forefront, the problem of distinguishable pattern of income distribution also attracted much interest. On of the earliest known research studies in this directio was apparently conducted in Poland. On the basis o materials pertaining to the 1958 distribution of wage and salaries, E. Vielrose concluded that the shape o this distribution can be best described by a lognorma distribution curve.[52] Similar results were recently obtaine for Poland in respect of the distribution of per capit

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[50] This was done in Hungary in connexion with work on th income model (see below) where the future distribution of wage income was estimated by reference to the planned increase in th average wage and certain assumptions with respect to the chang in the σ parameter of the two parameter lognormal distribution

[51] A practical advantage derived from knowing the type of distribution is that the size of the sample survey needed in order t determine the distribution can be considerably reduced. With thi knowledge, it is sufficient to determine the parameters of the distribution, and these can be ascertained with adequate accuracy fron relatively small samples.

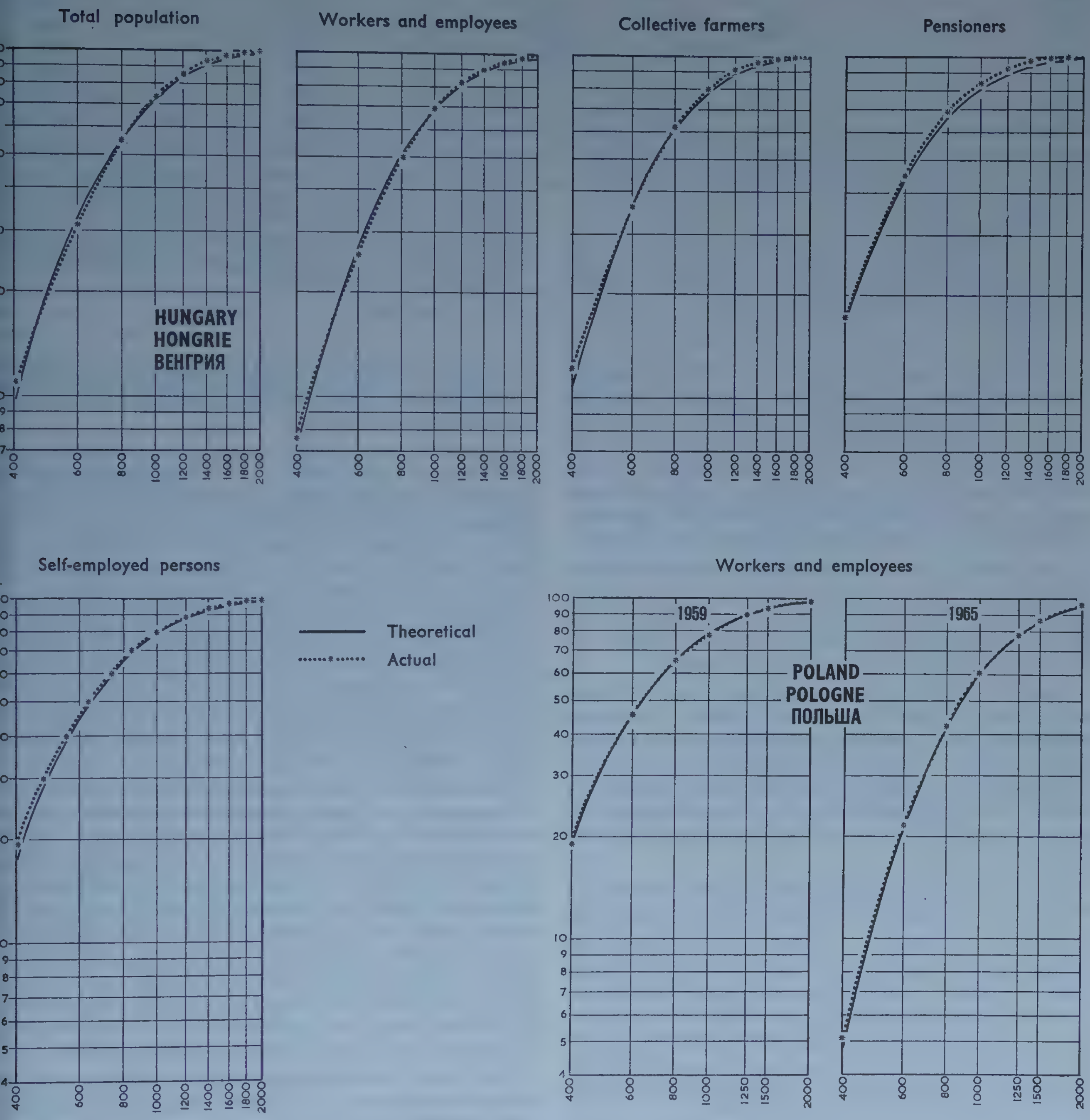
[52] In an earlier analysis, based on similar data for 1955, O. Lang pointed out that the distribution does not follow the Pareto formula He concluded that it resembles the shape of the right hand side of normal curve (see *Wstep do ekometriki*, Warsaw 1958, p. 205) E. Vielrose, by comparing the fit of the Pareto, the normal and th lognormal curves to the 1958 data, came to the conclusion that th deviations from the lognormal curve are smaller than from th normal, whereas the deviations from the latter are smaller than thos from the Pareto curve, as indicated by the following data:

Income in zlotys	*Actual distribution per cent*	*Theoretical distribution per cent*		
		Pareto	*Normal*	*Lognormal*
Below 600	4.2	49.4	7.3	4.2
600-800	7.0	11.1	11.1	9.2
800-1 000	11.2	6.9	13.9	12.9
1 000-1 200	14.0	4.7	16.0	13.3
1 200-1 500	19.5	4.9	22.5	17.8
1 500-2 000	22.1	5.1	22.7	20.1
2 000-2 500	11.3	3.1	5.8	10.7
2 500-3 000	5.4	2.2	0.7	5.6
3 000-5 000	4.8	4.3		5.5
Over 5 000	0.5	8.3		0.7
Total	100.0	100.0	100.0	100.0

Source: See V.E. Vielrose, *Rozklad dochodow wedlug wielkosci*, Warsaw 1960, p. 1

CHART 9.1

heoretical and actual cumulative frequency distribution of incomes in Hungary (1962) and in Poland (1959 and 1965)



Sources: As for Tables 9.19 and 9.20.

TABLE 9.20

Share of ordinal groups of income recipients in total income by various categories of population

Total income of the given group = 100

Share of ordinal groups (per cent)	Hungary (1962)[a]					Poland (b)[a]	
	(a)	(b)	(c)	(d)	(e)	1959	1965
0-20	9.1	9.2	9.5	8.9	8.1	8.2	9.2
21-40	14.0	14.1	14.4	13.8	13.1	13.1	14.1
41-60	17.9	18.0	18.2	17.9	17.4	17.1	18.0
61-80	23.2	23.5	23.1	23.2	23.6	23.8	23.1
81-90	14.5	14.0	14.2	14.6	14.9	14.6	14.4
91-95	9.2	8.8	8.9	9.3	9.4	9.8	9.1
Top 5 per cent	12.3	12.1	11.7	12.5	13.6	13.4	12.1
Concentration ratio[b]	0.27	0.26	0.25	0.28	0.30	0.29	0.26

Key: (a) Total population.
(b) Workers and employees.
(c) Collective farmers.
(d) Pensioners.
(e) Self-employed persons.

Source: Data for Hungary derived by the secretariat; the parameters for Poland are given in *Wiadomosci Statystyczne No. 7,* 1966.

[a] The figures represent the first moment distribution of the lognormal function with parameters υ and σ obtained from the original distribution.

[b] The coefficients measure the concentration of incomes as defined by Lorenz. They represent the ratio of the area between the Lorenz curve and the diagonal representing full equality to the area under the diagonal. It ranges from 0 for complete equality to 1 for maximum inequality.

incomes in the years 1959, 1962 and 1965 among the population living on wages and salaries,[53] and for Czechoslovakia with respect to the distribution of wages and salaries in 1959.[54] For Hungary, extensive tests were reported to have been made on 31 distributions derived from the material of the 1959 survey, with the result that the points obtained from the theoretical lognormal distribution "fit in most cases" the empirical data.[55]

That the log-normal description fits the available data on the distribution of per capita income is illustrated in Chart 9.1. In none of the distributions plotted in this chart is the sum of the absolute differences between the theoretical and the actual values very large.[56]

Given the high degree of approximation to the empirical values, it is possible to derive a number of measures which are of great analytical importance. First, concentration coefficients can be obtained easily by reference to one of the parameters of the distribution without the need for tiresome computations and graphical approximation. Secondly, the share of ordinal groups of income recipients in total income can be estimated, thus providing a greater scope for international comparisons. Table 9.20 reproduces such estimates.

A comparison of the concentration of coefficients shows that the concentration of income among workers and employees was higher in Poland than in Hungary. However, between 1959 and 1965 there was a distinct decline in the degree of inequality of the Polish distribution with the result that it appears at present to be equal to the corresponding Hungarian distribution. It is noteworthy that the described decline took place in a period when the dispersion of wages showed little change. This again brings home the importance of other factors in shaping the distribution — in the case in question apparently reflecting the increase in activity rate which took place in this period and which has a moderating influence on the disparity of combined family incomes.

The analysis also reveals some differences in the degree of inequality of income distribution between various socio-economic groups. The data show the lowest income concentration (i.e. inequality) to be in Hungary among the farmers and to be highest among self-employed persons. A higher than average concentration also exists among pensioners, apparently reflecting the considerable variation in the incidence of other incomes than pensions that is characteristic for this group. The concentration in the income distribution of the worker and employee population appears to be slightly lower than in the above two groups, but rather higher than among farmers.

The value of the concentration coefficient for the income distribution of the whole population is available only for Hungary and, as can be seen from the table, it is only slightly higher than the coefficient for the population of workers and employees.

A factor to be borne in mind in making these comparisons, whether of international differences or of changes ver time, relates to differentials in the price level for ower and higher income groups. It goes without saying hat price patterns differ considerably from one country o another. While it is not possible to go into exhaustive nalysis of such differences here, it would appear that he price structure is more favourable for the lower ncome groups in, for instance, Hungary than in Poland. Ience, if allowance is made for this factor, the indicated lifferences in the income distribution between the two countries would be larger. On the other hand, the tendency evident in all the centrally planned economies for prices of consumers' manufactured goods to decline in relation to those of foodstuffs must have been a factor contributing to a widening of inequality of income distribution.[57]

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[53] See J. Kordos, *Wiadomosci Statystyczne*, No. 7, 1966.

[54] See I. Novak, *Statistika a Demografia, Vol. VI*, Prague 1966.

[55] See Ö. Éltetö, "Analysis of the Types and Characteristics of the Income Distributions" in *The Standard of Living*, Budapest 1962. The author states in this connexion: "In our investigations we have learnt by experience, in the first place, that the per capita and per consumption unit income distributions fit the lognormal distribution well, with the exception perhaps of the income distribution of households with one and two members." From a practical point of view, however, the deviation of the empirical from the assumed lognormal distribution was — even in these cases — insignificant and in general it only appeared at the outset of the distribution.

[56] The sum of differences (expressed in percentage points) for the groups distinguished in the chart is as follows: Hungary — total population, 10.4; workers and employers, 9.2; collective farmers, 11.0; pensioners, 19.7; self-employed persons, 9.9. Poland — members of workers' and employers' households, 2.4 (1959) and 3.7 (1965).

9.4 THE USE OF "INCOME MODELS" FOR PLANNING PURPOSES

It is apparent from the above discussion that consideration of the distribution of wage-earners according to vage size is in itself of limited use for welfare planning. n order to influence or to forecast trends in living standards, planners need to know the nature of the interrelations between wages, total family earnings, total amily income (including social benefits) and family ize, and the effect of these variables on the dispersion of ncome — the most relevant for this purpose usually being he distribution of households by per capita family ncome. Awareness of the importance of such analyses or planning purposes has been increasing since the late 950s, when studies were begun in a number of countries, ulminating — in some cases — in the establishment of system of econometric models describing the interrelations between the wages, incomes and consumption of workers' families.

Work on the construction and the application of such nodels has apparently been taken farthest in the Soviet Jnion and in Hungary — the two countries for which ome details have been published. Although still of imited importance as a basis for taking policy decisions, hese analyses are of much interest from the point of iew of the present study, in that they include an attempt o quantify the various factors determining the differentiation of family incomes. They also contain an exercise n projection which — although not hitherto linked to lanning procedures — provides a framework making t possible to trace the effects of changes in wages, amily allowances, pensions, etc., on the one hand, and of demographic factors, on the other, on income distribution among households.

Both the Soviet and the Hungarian analyses are restricted to the population living on wages and salaries. The elements entering the formula describing the factors esponsible for the differentiation of per capita incomes re also broadly similar, although the Soviet model elates to the wage of the main earners (head of household) while its Hungarian counterpart relates to the verage wage received by all family earners.

There is, however, a significant difference in the nature of the problems that the two investigations had to resolve. Since the pattern of income distribution in Hungary vas known — thanks to the availability of a well constructed sample survey — the problem was largely one of mapping out the probabilities that persons belonging o a certain income bracket in the base period would become members of another given income group in the plan period. By contrast, the data available from the 1958 Soviet family income survey could not be considered representative for the whole wage- and salary-earning population.[58] Accordingly, it was necessary to devise a model for the Soviet investigation which would permit (using available sample data) an unbiased estimate of the existing income distribution to be derived, and one which would also be helpful in analysing the effect of various income measures on future changes in that distribution. On certain assumptions concerning probable changes in the statistical parameters used, the model could also be helpful in projecting income distribution over the plan period. For the purpose of the model, the following identity was defined.[59]

$$(1)\quad h = \frac{a'\,(1 + wk - w)\,(1 + d)}{L}$$

where h = per capita income
a' = wage of the main earner (head of household)
w = relation between the average wage of the other active household members to the wage of the main earner
k = number of earners in the household
d = the ratio of non-wage income to wage income
L = size of the household

The method used by the Hungarian Planning Office was to apply simulation procedures in which expected changes in various factors determining the distribution of incomes were projected to micro-economic units. The information thus obtained was then aggregated to provide a picture of the income distribution on the aggregate level. For the purpose of the exercise a stratified sample, including about 2,000 households, was selected from the materials of the 1959 micro-census. The simulation experiment consisted in tracing the effect of (*a*) changes in wages, (*b*) changes in the activity rate and (*c*) changes in incomes other than wages.[60]

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[57] But it should also be noted that the effect of this factor may have been offset in part by the tendency for the relative prices of services to increase.

[58] This is on account of the method by which the survey was designed. See footnote 2 on p. 2.

[59] In the actual analysis the expression $w\ (k - 1)$ was further broken down into wk_1, wk_2, etc. denoting the wage of the second, third, etc. earner in relation to the wage of the first earner.

[60] The experiment involved two steps. The sample was disaggregated into types of households according to the number of family members and of earners. Then the prospective income distribution of individual family types was estimated. The second step consisted

(Continued at foot of next page.)

Thus, the comparable formula in the Hungarian model reads:[61]

$$h = a.\,b.\,c$$

where

a = the average wage per wage-earner

$b = \frac{K}{L}$ = the rate of activity of the household

$c = (1 + d)$ = the ratio of total income to wage income.

Notwithstanding its great methodological interest, little is known about the analytical results obtained from the Hungarian model. The only information published relates to estimates expressing numerically the relative importance of various factors influencing the distribution of family incomes. For this purpose a further step was taken to disintegrate the expressions [62]

$$b = b_1 \,.\, b_2$$
$$c = c_1 \,.\, c_2$$

Here b_1 indicates the rate of gainful employment of those who are employable; b_2 indicates the ratio of the potentially employable persons to the number of people in the household; c_1 shows the influence of social benefits and c_2 that of auxiliary incomes from private sector.

Some results are presented in the text table below. Thus, according to the computations, differences in the ratios of gainfully occupied household members were, in 1959, the most important factors causing inequalities in the income distribution of the population living on wages and salaries. The logarithmic variance of per capita income (the σ^2 parameter of the lognormal distribution function mentioned in the text above) was due (to the extent of about 80 per cent) to differences in activity rates (b), and to the extent of about 40 per cent to differences in the average earnings of the gainfully occupied members of the household (a). The logarithmic variance determined by these two factors was reduced by about 20 per cent as a consequence of the levelling effect of incomes other than wages (c).

The relative importance of the various factors is found to be largely the same among workers' and among employees' households. However, it is noteworthy that the extent of variation caused by different ratios of gainfully occupied household members is somewhat larger among workers' than among employees' families, where the compensating effect of incomes other than wages is also larger.

Hungary : Relative importance of various factors determining the logarithmic variance of per capita income in 1959[a]

	a	b	b_1	b_2	c
All workers and employees . .	41.7	78.7	33.8	44.9	—20.4
of which :					
workers	38.1	83.5	32.6	50.9	—21.6
employees	36.6	78.4	33.0	45.4	—15.0

[a] For an explanation of symbols see text. The computations refer to the variance (σ^2 parameter) of the lognormal distribution function with two parameters characteristic of the period. For a mathematical description see source—Ervin Frigyes, *A munkások és alkalmazottak jövedelemeloszlásának elemzése és tervezési módszerei*, Budapest 1965.

An interesting feature of the above computations is that the relative importance of the proportion of actual employment in the potential labour force (b_1) is not very much lower than that of the proportion of the potentially employable persons in the household (b_2). Thus, the table indicates a coefficient of 34 per cent for the former, as against 45 per cent for the latter, in the population of all workers' and employees' households. The difference between the coefficients is only slightly greater in workers' than in employees' households when the two are taken separately. It must be noted, however, that dependants of working age consist largely of women, many of whom have to take care of several children and therefore may not be considered "potentially" employable. Since the number of children to be taken care of is generally much larger in the lower than in the higher per capita income families, a relatively greater proportion of women in the former group would properly have to be classified among the unemployable. It follows that b_1 tends to be relatively under-stated and b_2 over-stated among less well-off families, and consequently that the actual role of b_1 is smaller, and that of b_2 larger, than indicated in the above figures.

Other important relations were uncovered by an earlier exercise which consisted in grouping households together according to various criteria and measuring the effect of the different factors distinguished in the model in

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of estimating changes in the distribution of the population by family types, as well as the effects of these changes on the distribution of the income. In order to trace changes in wages, planned wage measures were taken into consideration, as well as the tendency for the distribution of wages to assume a lognormal form (see above text). A more detailed description of the procedure followed is given by E. Frigges, "A simulation experiment for estimating per capita income distribution", in *Economics of Planning*, Vol. 5, No. 3, Oslo 1965.

[61] This formula is essentially the same as that employed in Chapter 7 for the study of factors responsible for trends in per capita income over time. The symbol (c) covers, in addition to transfer income from the socialist sector (pensions, stipends, family allowances, etc.), incomes from household plots (in cash and in kind) and occasional incomes (mainly originating from secondary redistribution of incomes within the population sector). In other words

$$c = \frac{M + E + D + F}{M}$$

where

M = Wage income

E = Other money income from the socialist sector

D = Income from household plots, in cash and in kind

F = Occasional incomes

Moreover, a distinction has been made between various categories of dependent household members by defining

$$L = K + T + P$$

where

T = number of dependants who are not potentially employable (children, students, aged people, invalids)

P = number of dependants who potentially could take up gainful employment.

Consequently, the Hungarian formula can also be written

$$h = \frac{M}{K} \cdot \frac{K}{K + P + T} \cdot \frac{M + E + D + F}{M}$$

[62] Following the notations of the previous footnote $b_1 = \frac{K}{K + P}$, $b_2 = \frac{K + P}{K + P + T}$, $C_2 = \frac{M + E}{M}$ and $c_2 = \frac{M + E + D + F}{M + E}$

TABLE 9.21

Hungary, 1959 : Relative importance of various factors determining per capita income differences between specified groups of households[a]

Household group	Factor				
	a	b_1	b_2	c_1	c_2
Below and above average per capita income households	33.8	35.6	46.1	−8.8	−6.7
One to three, and four and more, member households	−0.8	28.2	89.8	−11.5	−5.8
Urban to rural households[b]	29.1	81.0	27.8	−0.2	37.7
Workers' to employees' households	79.9	37.2	−1.7	−5.1	−10.3

Source: E. Frigyes, "A munkás és alkalmazotti jövedelmi rétegződés legfontosabb ényezői", *Statisztikai Szemle*, No. 7, 1964, pp. 748-766.

For an explanation of symbols, see text. The figures in this table were obtained by grouping the households into two groups—I and II—according to the specified criterion, and deriving the relation:

$$\frac{h^{I}}{h^{II}} = \frac{a^{I}}{a^{II}} \cdot \frac{b_1^{I}}{b_1^{II}} \cdot \frac{b_2^{I}}{b_2^{II}} \cdot \frac{c_1^{I}}{c_1^{II}} \cdot \frac{c_2^{I}}{c_2^{II}}$$

from which

$$\log \frac{h^{I}}{h^{II}} = \log \frac{a^{I}}{a^{II}} + \cdots + \log \frac{c_2^{I}}{c_2^{II}}$$

The quotients

$$\frac{\log \frac{a^{I}}{a^{II}}}{\log \frac{h^{I}}{h^{II}}} \quad \frac{\log \frac{b_1^{I}}{b_1^{II}}}{\log \frac{h^{I}}{h^{II}}} \quad \text{etc.}$$

multiplied by one hundred, yield the percentages given in the table.

[b] Households of workers and employees living in Budapest as compared with those living in rural areas.

letermining the difference between the per capita income of any two comparable groups. Table 9.21, which summarizes some of these findings, indicates that the figures lepicting the relative importance of the various factors n determining the difference in per capita income between iouseholds having below and above average incomes are of about the same magnitude as those which depict the nfluence of the corresponding factors on the total variance n the per capita income. A new, and somewhat unexpected, relationship revealed here is that obtained from he breakdown of the (*c*) factor into c_1 and c_2, indicating hat the compensating effect of non-wage incomes from private sources is almost as great as that from social benefits (c_2 has a coefficient of 6.7 per cent as compared with 8.8 per cent for c_1). The second row of the table hows that the role of the wage factor (*a*) is negligible n the differentiation of per capita income as between mall and large families. On the other hand, within the *b*) factor, the ratio of employable people is decisive and he influence of different rates of employment of employable people relatively limited.

The table shows that differences in per capita income between households of workers and employees living in urban centres and those living in rural areas are determined by differences in the level of wages to only a comparatively small degree. The predominant determinant of these differentials is differences in the rate of employment of employable people (b_1), reflecting the reater employment opportunities existing in large urban ectors as compared with rural areas. A considerable compensatory role is played by non-wage income from private sources (mostly income derived from agricultural activities), which offsets some 40 per cent of the spread reated by the relatively higher wages and higher activity ates in urban centres.

The coefficients measuring the relative contributions of various factors in determining differentials in per capita income between workers' and employees' households provide a certain contrast. Two elements — relatively higher average earnings, and the higher activity rates, of employable persons — account entirely for the higher per capita income of employees' households, the former factor being by far the more important of the two. Differences in the proportion of potentially employable persons in the household play no part in the creation of these differentials, but a certain compensatory contribution is made by non-wage incomes. Of the two components of such incomes distinguished in the model, the compensatory effect of incomes from private sources is greater than that of social benefits.

Reflecting the differences in aims mentioned earlier, the Soviet investigation consisted of an attempt to derive the size distribution of combined per capita incomes from a given set of data on the distribution of incomes by individual recipients. The underlying assumption was that certain relationships observed in the available sample data on households are regular enough (under any given demographic and other conditions affecting income distribution) to serve as a transformation scheme for deriving the distribution of total and per capita income. In other words, it was believed that, by applying the numerical expressions of these relationships to a given distribution of incomes by individual recipients, it should be possible to obtain an unbiased frequency distribution of combined per capita incomes. Another analogous assumption was that the factors determining the transformation of a given size distribution of incomes by individual recipients into a distribution of per capita incomes do not change significantly in the interval between the base and the plan period; and that in so far as such changes do take place it is possible to incorporate them into the transformation model. In this way, in addition to being used for estimating the distribution of per capita income in the base period, the coefficients can

TABLE 9.22

Soviet Union, 1959 : Distribution of wage- and salary-earners by rank in various wage brackets

Percentages

Monthly wage (roubles)	All workers and employees	of which: first earner	second earner	third and above earner	one-person households
Below 50 . .	100	24	50	12	14
50-60 . .	100	30	48	8	14
60-70 . .	100	38	41	7	14
70-80 . .	100	48	33	5	14
80-90 . .	100	57	25	5	13
90-100 .	100	65	19	4	12
100-120 .	100	75	13	2	10
120-140 .	100	82	8	3	7
140-200 .	100	87	4	3	6
Above 200 .	100	93	3	1	3

Source: Rimashevskaya, *op. cit.*, p. 88.

also be utilized for projecting such distribution into the plan period.

Accordingly, the method of the Soviet Labour Research Institute was to construct a set of matrices which, when applied in succession to a given distribution of wage-earners by size of income, would finally yield the per capita income distribution of the wage-earning population. Since a new distribution characterizing the process of formation of per capita incomes is created at each successive step, the method makes it possible to analyse and to appraise numerically the effect of the factors operating at each stage. Besides serving as links to the model, the matrices are also of considerable interest in providing a comprehensive picture of the inter-relationships between the various variables affecting the distribution of per capita incomes. They are therefore reproduced in some detail below.

The first matrix, presented in Table 9.22, shows th relationship between the wage level and the economi role played by the earner in the family — acting as mai or second, third etc. earner. The table indicates that th majority of low paid workers consists of those who ar not the main breadwinner, whereas the predominan part of the better paid workers are. With the increase i wage level, the proportion of first earners (head of households) in the total earners classified in a given wag bracket increases uniformly, whereas the proportion c second and third earners decreases sharply. Beyond certain wage class, the proportion of wage- and salary earners living in one-person households also falls.

The system of coefficients presented allows a breakdown to be obtained of the distribution of all wage earners into a distribution of first, second, etc. earners – all in terms of the size of wage incomes. From the poin of view of the model, the most important is, of cours the distribution of first earners, as it also represents th distribution of households by the size of wage of th main supporting member. The distribution of wage earners living in one-person households is also importan as it is utilized at the final stage of the computations c per capita income distribution. The distributions of th second, third etc. earners by size of wages are used fo auxiliary analyses.

Once the distribution of households by size of earning of the main breadwinner has been obtained, the nex step is to compute the distribution of households by siz of total wage income. In order to do so, a series c matrices are used which bring out the relationship betwee the earnings of the head of the household and the earnings of the second earner, the combined earnings of th first and the second earner with the earnings of th third, etc. Table 9.23 shows coefficients expressing th relation between the earnings of the first and second earne from which several interesting inter-relationships ar

TABLE 9.23

Soviet Union, 1959 : Distribution of families by the size of secondary wage incomes, at various wage levels of the household head

Percentages

Monthly wage of the household head in roubles	Average income of the second earner in roubles: 0[a]	0-30	30-40	40-50	50-60	60-80	80-100	100-140	140-200	over 200
Below 50	55	12	18	15						
50-60	49	9	13	19	10					
60-80	38	6	9	13	17	16				
80-100	31	4	7	13	12	23	10			
100-140	29	3	6	11	12	20	13	6		
140-200	36	2	5	9	10	16	11	9	2	
200-300	42	2	2	6	6	13	11	11	5	2
Above 300	43	2	1	2	3	8	13	13	8	7

Source: Rimashevskaya, *op. cit.*, p. 92.

[a] Percentage of families having only one gainfully employed member.

TABLE 9.24

Soviet Union, 1959 : Incidence of non-wage income by size of wage income

Total monthly wage income of household (roubles)	Proportion of households without other incomes (percentages)	Non-wage income groups					
		Up to 20	20-40	40-60	60-80	80-120	over 120
		Percentage et households with non-wage income					
Up to 40	35	46.2	33.8	12.3	3.1	3.1	1.5
40-60	40	45.0	33.3	11.7	5.0	3.3	1.7
60-80	49	43.2	35.3	13.7	3.9	3.9	—
80-100	57	39.4	32.6	13.9	4.7	4.7	4.7
100-140	68	37.5	34.4	15.6	6.3	3.1	3.1
140-200	74	38.5	34.7	15.4	3.8	3.8	3.8
200-300	72	35.8	32.1	14.3	7.1	3.6	7.1
Over 300	63	21.7	35.1	18.9	8.1	8.1	8.1

Source: Rimashevskaya, *op. cit.*, p. 95.

pparent. It shows that, with an increase in the level of arnings of the first earner, the proportion of families aving no other earners tends first to decrease and later increase sharply. Thus, the proportion of families ith only one supporting member is extremely high in e lower wage brackets. Among families whose head eceived a wage of below 50 roubles in 1959, the proporon which had only one wage-earner was as high as 5 per cent. The proportion of such families tended to ecline steeply with an increase in wage level, reaching minimum at the 100 - 140 rouble bracket — which is onsiderably above the average wage. Thereafter it rose harply, but without reattaining the initial level. Even t the extremely high (at that time) wage level of 00 roubles, the proportion did not exceed 42 per cent. econdly, the table indicates that there is a definite relaonship between the level of wages of the first family arner and the level of earnings of the second member. nvariably, the wage of the second member tends to icrease with the income of the first. The statistically xpected central value of the wage of the second member rises, however, less than in proportion with the increase of the first. In consequence, the ratio of the second to the first wage tends to be greater in the low than in the high wage brackets.

At the next stage allowance is made for the effect of the incidence of incomes other than wages on the distribution of household incomes. The system of coefficients used for this purpose (shown in Table 9.24) defines the relationship between the level of the total wage income of the household and the level of non-wage income. An important feature brought out by this table is that there exists, even at the lowest level of wage income, a very high proportion of families with no other incomes whatsoever. With the increase in the income bracket, the proportion of families living entirely on wage income rises steeply, but only up to a certain income. At the very high income levels the direction is reversed. Moreover — although to a much lesser extent than in the relationships observed in the previous table — there is some tendency for the size of non-wage income to increase with the size of wage income.

TABLE 9.25

Soviet Union, 1959 : Distribution of households in various income brackets by size of household

Percentages

Income per household (roubles)	Number of people in household					
	2	3	4	5	6	7 and above
Below 40	68	20	7	4	1	—
40-60	59	24	10	4	2	1
60-80	52	27	13	5	2	1
80-100	40	30	17	8	3	2
100-140	29	35	22	10	3	1
140-200	19	38	27	11	4	1
200-300	8	31	32	19	7	3
300-400	6	21	31	22	12	8
400-500	7	20	25	24	14	10
500-600	5	18	28	20	14	15

Source: Ibid.

The evident implication of these findings is that, since the increase in non-wage income from one income class to another is quite modest, and falls far behind the increase in the class intervals themselves, the incidence of such income (although raising the absolute difference between low and high income class households) tends to reduce the relative income differentiation among households. The change in the proportion of households receiving non-wage incomes has the same effect. But these relationships no longer hold in the highest income brackets, wheve both the proportion of households receiving non-wage incomes as well as the size of these incomes tend to rise.

The final stage of the estimation is to transform the size distribution of household income into the distribution of per capita incomes. The matrix used for this purpose, defining the relation between the size of family income and the number of people in the household, is shown in Table 9.25.

To complement the analysis, two more distributions are needed — the size distribution of one-person one-earner households and that of one-person non-earner households. The former is obtained from the above-mentioned size distribution of wages of earners living in single households by means of a matrix similar to that used in deriving the size distribution of total incomes
of households from the size distribution of total wa
incomes.

The estimations described were carried out by ele
tronic computers, first with the object of testing t
method itself[63] and then in order to estimate the distr
bution of per capita incomes in the Soviet Union as
whole, and in particular regions. The effect which planne
income measures will have on future income distributic
was also calculated, including a long-term projectic
and annual projection (apparently for the years 19
and 1965).

Little is known about the results of these calculation
or about the problems encountered. Various shor
comings of the method have been mentioned, by at lea
one writer, who proposed the use of more convention
methods of regression analysis.[64] However inexact th
fit obtained in the projection exercise, there is, neverth
less, general agreement that the method has proved i
usefulness as a tool for preparing income policy decision

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[63] The test consisted of estimating, for a population of househol
for which both distributions were known beforehand, the distr
bution of per capita incomes from a given distribution of wa
incomes.

[64] V. V. Shvyrkov, *Ekonomiko-matematicheski analiz potr*
bitelskogo sprosa, Moscow 1966, p. 148 ff.

Appendix 9.I

NOTE ON THE WAGE-TAX SYSTEMS OF THE CENTRALLY PLANNED ECONOMIES

Personal income-taxes account for only a small proportion of overnment revenue in the centrally planned economies. It can be en from the figures below that the proportion of total budgetary venue obtained from personal taxation ranges, among the countries nder study, from around 6 to 10 per cent.

Share of the taxes levied on individuals in budgetary revenue

(Percentages)

zechoslovakia (1964)	
(1) All taxes levied on individuals	10.1
(2) *of which:* wage taxes	9.6
lungary (1960 plan figure)	
(1) All taxes levied on individuals	6.5
(2) *of which:* wage taxes	..
oland (1964)	
(1) All taxes levied on individuals	6.0 [a]
(2) *of which:* wage taxes	4.7
umania (1964)	
(1) All taxes levied on individuals	..
(2) *of which:* wage taxes	5.0
oviet Union (1964)	
(1) All taxes levied on individuals	7.2
(2) *of which:* wage taxes	..

Source: Statistical yearbooks.

Excluding taxes levied on agricultural producers and private enterprises.

Apart from small amounts of taxes levied on self-employed ersons and on people deriving money from special services (such s authors, artists, etc.) and from private farming, taxes on indiidual incomes consist of wage taxes deducted at the place of mployment. From the beginning of the 1950s until around 1956 here was little change in the structure of the wage-tax system. ince then, the tendency has been to raise exemption limits and/or o reduce rates; and the Soviet Union adopted a plan (apparently ubsequently shelved) to eliminate the wage tax altogether (see hapter 7). The following paragraphs give a summary description f the present situation country by country.

In *Bulgaria*, wages, salaries or other remuneration of workers and mployees are taxed on the following scale:

ages and salaries (leva per month)	*Income-tax (leva)*
Up to 20.4	0.4
30	0.8
40	1.4
50	2.1
60	2.9
70	3.9
80	5.0
90	6.2
100	7.4
110	8.6
120	9.8
130	11.0
140	12.2
150	13.4
160	14.6
170	15.8
184	17.5
Over 184	17.5, plus 12 per cent on the amount of income over 184 leva

The principle on which the tax is estimated is straightforward. The exemption limit is 20 leva per month, above which the first 0.4 leva are taxed away. This amounts to a 2 per cent rate at the starting level; thereafter both the average and the marginal rates go up steeply, until the marginal rate reaches 12 per cent at a monthly wage of 90 leva, when the average rate is 6.9 per cent. With the marginal rate fixed at 12 per cent in the higher brackets, the average rate rises to 9.5 per cent at 184 leva, very slowly converging towards 12 per cent thereafter. Bachelors, single people, and couples who are childless after three years of marriage pay an extra 5 per cent, but there are no reductions for large families.

In *Czechoslovakia*, the basic tax rates applying to wage- and salary-earners with two dependants are as follows:

Monthly earnings and (Kčs)	*Tax rate* (Kčs)
200 and Below	No tax
201-300	5 %
301-400	8 %
401-600	32 Kčs + 10 % of income above 400
601-800	52 Kčs + 11 % of income above 600
801-1 000	74 Kčs + 12 % of income above 800
1 001-1 200	98 Kčs + 13 % of income above 1 000
1 201-1 400	124 Kčs + 14 % of income above 1 200
1 401-1 600	152 Kčs + 15 % of income above 1 400
1 601-1 800	182 Kčs + 16 % of income above 1 600
1 801-2 000	214 Kčs + 17 % of income above 1 800
2 001-2 400	248 Kčs + 18 % of income above 2 000
above 2 400	320 Kčs + 20 % of income above 2 400

The tax is increased for:

(*a*) tax-payers without dependants or with one dependant, by 100 per cent — provided monthly earnings exceed 460 Kčs;

(*b*) tax-payers without dependants who have brought up at least one child, by 66 per cent — provided monthly earnings exceed 560 Kčs;

(*c*) wives living with their husbands in a common household and having brought up at least one child, by 66 per cent — provided monthly earnings exceed 560 Kčs.

The tax is reduced for:

(*a*) tax-payers with three dependants, by 30 per cent;

(*b*) tax-payers with four dependants, by 50 per cent;

(*c*) tax-payers with five or more dependants, by 70 per cent.

If both husband and wife are employed, they are free to decide who will benefit from the reduction for dependants. The other party is then taxed as having no dependants.

There is an increase in the rate for bachelors above 25 years of age.

Thus, the particularity of the system is that the basic assessment relates to the individual wage-earner, but rates are differentiated to take family circumstances into account. There is no tax advantage for a married couple as opposed to two single people. However, there is an increase in the rate for bachelors above 25 years of age, while people who have brought up at least one child enjoy a tax reduction. The tax advantage increases considerably with the increase in the number of dependants, a tax-payer with no, or only one, dependant paying four times as much as one with four dependants, and nearly seven times as much as one with five or more dependants. Reductions are granted for each dependant in a family with between two and five dependants, but these can be enjoyed by only one wage-earner.

The exemption limit in the Czechoslovak tax is 200 Kčs per month, a five per cent tax being charged if earnings are between two and three hundred Kčs, and 8 per cent if they are between three and four hundred. At four hundred Kčs the average tax amounts to 8 per cent; beyond that point it begins to rise uniformly under the influence of a marginal rate which begins at 10 per cent, but rises to 20 per cent at the level of 2,400 Kčs, when it ceases to increase. The average rate at this level is 16.8 per cent, converging slowly towards 20 per cent at the maximum wage.

In *eastern Germany* the wage tax system is complex. In order to take the family circumstances of the wage-earner into account, three tax classes are distinguished:

Class I includes single people (except those belonging to classes II and III);

Class II comprises married men and women, unmarried men above the age of 60, unmarried women above the age of 40 (except unmarried women with children who belong to Class III);

Class III includes wage-earners with children, and is further differentiated by the number of children.

For wage-earners paid at monthly rates the exemption limits are as follows:

Class I 182 DM
Class II 232 DM
Class III (one child) 282 DM; for each additional child the limit is raised by 50 DM.

The wage tax is constructed as follows.[1]

The first DM 1 above the exemption limit is taxed away.

	Tax rates for additional tranches
Next 20 DM above exemption limit	10 per cent
Additional 100 DM	15 per cent
Additional 100 DM	20 per cent
Additional 100 DM	24 per cent
Additional 100 DM	30 per cent
Additional 100 DM	34 per cent
Additional 400 DM	22.5 per cent
Additional 100 DM	21.5 per cent
Over 1 560 DM per month	Flat tax rate 20 per cent on total wage (exemption excluded)

These rates bring the average tax rate in Class I from 5 per cent at a 270 DM monthly wage to 10 per cent at 414 DM, 15 per cent at 594 DM and finally 20 per cent for 1,260 DM and above. I should be noted, however, that the progressiveness in principl applies only to basic wage rates: premia and remuneration for above norm or exceptional work performance are either taxed at a fla 5 per cent or are fully exempt from taxes.

The following excerpt from the official tax table indicates th differences in tax assessment of various incomes due to the classification of tax-payers into various categories:

Monthly wage in DM	Assessed tax in DM						
	Class I	Class II	Class III (number of children)				
			1	2	3	4	5
231. . .	7.6	—	—	—	—	—	—
281. . .	15.1	7.6	—	—	—	—	—
331. . .	24.0	15.0	7.5	—	—	—	—
381. . .	34.0	24.0	15.0	7.5	—	—	—
431. . .	45.2	34.0	24.0	15.0	7.5	—	—
481. . .	57.2	45.2	34.0	24.0	15.0	7.5	—
531. . .	71.0	57.2	45.2	34.0	24.0	15.0	7.5
700 [a] . .	126.0	109.0	92.0	77.0	62.0	50.0	38.0
800. . .	148.5	137.3	126.0	109.0	92.0	77.0	62.0
1 000 . .	193.5	182.3	171.0	159.8	148.5	137.3	126.0
1 200 . .	238.5	227.3	216.0	204.8	193.5	182.3	171.0
1 500 . .	300.0	290.0	280.0	270.0	260.0	249.8	238.5
1 560 and above — all classes 20 per cent of income less :							
	—	10.0	20.0	30.0	40.0	50.0	60.0

[a] Wage level at which the difference between the extreme categories is largest in absolute terms.

Since the wages of husband and wife are assessed separately, the combined tax advantage for a married couple as opposed to two single people increases from 15, DM at two monthly wages of 282 DM, to 34 DM at a level of around 700 DM and then decreases gradually to 20 DM for wages above 1,560 DM. A similar pattern of advantages obtains for each child in the family.

The east German wage system favours married people, families with children and aged single wage-earners. It also treats married women more favourably — thus providing an additional incentive for them to take up gainful employment. This is achieved not only by granting exemptions for both wife and husband, but also through the combined effect of progressiveness and separate assessment. Thus, for instance, a married couple with a single wage of 1,000 DM has to pay 182.30 DM wage tax, while if they each earn 500 DM, their total tax would be only 100 DM. With two children and the same wages, the taxes would amount to 159.80 DM and 56 respectively.

It would seem that the tax system is more suited to promoting high female activity ratios than to alleviating hardship in those relatively large families where, for one reason or another, the wife is not in a position to work outside or earns too little to take full advantage of the tax exemptions.

In *Hungary*, the wage tax is in reality a flat 15 per cent payroll tax paid directly by enterprises on the basis of their total wage disbursements. The redistributive effect of the tax is nil. However a flat tax is also levied on second jobs (10 per cent) and, above a certain limit, on secondary non-wage incomes of wage-earners (e.g. authorship). These provisions have a certain progressive effect which results in smaller net earnings from these sources than if all earnings were derived from the main salary.

As mentioned in the text, Hungary is the only country where wage- and salary-earners have to contribute to the social security system. The contributions are assessed as follows.

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[1] Liberal professions pay somewhat higher and more progressive rates (maximum average 30 per cent) but have exactly the same tax classes and exemption limits as wage-earners.

Monthly gross wage	*Tax (percentage)*
under 1 800 forints	3
1 800-2 300	4
2 300-3 000	5
3 000-4 000	6
4 000-5 000	7
5 000-6 000	8
6 000-7 000	9
over 7 000	10

Poland's wage tax system combines fairly high progressiveness ith numerous other redistributive features. The standard rates pplying to married tax-payers with one or two children (and hildless couples married for a period of less than two years) are hown below. They start at an exemption limit of 1,000 zlotys, ut unlike the system in most other countries, the average rate tarts at a very low level and the marginal rate rises very moderately or the first tranche of 500 zlotys. The latter then increases steeply rom around 12 per cent at 1,500 zlotys to nearly 30 per cent at ,000 zlotys, beyond which level it starts to decline. The maximum verage rate (15 per cent) is reached at 5,000 zlotys, whereas it is round 5 per cent at the average wage level. Each wage is assessed eparately, but secondary incomes received by the same tax-payer re taxed at a flat average rate of 5 per cent until 770 zlotys per nonth, and at 7 per cent until 1,000 zlotys, with no exemption limit. bove 1,000 zlotys, secondary incomes are taxed at significantly higher rates than the corresponding rates for the first income, up to a maximum rate of 21.5 per cent reached at 4,000 zlotys.[2]

Basic tax rates in Poland

Earnings per month (in zlotys)		*Tax rate (percentage)*
over	*up to including*	
1 000	1 050	0.5
1 050	1 150	1.2
1 150	1 250	1.8
1 250	1 350	2.4
1 350	1 450	3.0
1 450	1 550	3.6
1 550	1 650	4.1
1 650	1 750	4.7
1 750	1 850	5.2
1 850	1 950	5.7
1 950	2 050	6.3
2 050	2 150	6.8
2 150	2 250	7.4
2 250	2 350	7.9
2 350	2 450	8.4
2 450	2 550	8.9
2 550	2 650	9.5
2 650	2 750	9.9
2 750	2 850	10.4
2 850	2 950	11.0
2 950	3 050	11.4
3 050	3 150	11.8
3 150	3 250	12.1
3 250	3 350	12.6
3 350	3 450	12.8
3 450	3 550	13.0
3 550	3 650	13.2
3 650	3 750	13.5
3 750	3 850	13.7
3 850	4 000	14.0
4 000	4 200	14.1
4 200	4 400	14.4
4 400	4 700	14.7
4 700	5 000	14.8
5 000		15.0

Male manual workers in industry,[3] with 3 or 4 children, get a rebate of 36 per cent, with 5 children or more, 75 per cent. For women tax-payers in the same category, the 36 per cent reduction applies to 2 children and the 75 per cent reduction to 3 or more. These reductions do not depend on the number of wage-earners in the household. Full tax exemption is granted to households where both parents have an earned income, when they have 7 children or more; or, if only the father has an earned income, 6 children or more; or if only the mother has an earned income, 4 children or more. The tax is increased by 20 per cent for single male tax-payers over 25 years of age, and by 10 per cent in the case of childless couples married for more than two years. This increase does not apply to tax-payers whose earnings are below a certain limit.

Although the method of adjustment to family size appears to be somewhat out-dated,[4] it contains an element of redistribution. In practice, the progressiveness of rates, combined with separate assessment, results in considerable fiscal advantages to small households where both husband and wife work; but — paradoxically — the fiscal redistribution in favour of large families is much less important in that category of households. This can be illustrated by the following example:

Monthly wage in zlotys	*Tax in zlotys*				
	Single people	Childless couples	Couples		
			with 3 children	with 5 children	with 7 children
3 000 (male worker)	410 [a]	376	219	86	0
1 800 (male worker)	112 [a]	103	60	23	0
1 200 (female worker)	22 [b]	24	5	5	0
Tax on joint wage		127	65	28	0

[a] Tax paid by single male above 25 years.

[b] Tax paid by single female wage-earner.

Thus, the difference in taxes between a childless couple and one with 3 children amounts to 157 zlotys if there is one earner, but only to 62 zlotys when the same combined income is obtained by two earners. This means, of course, that the tax advantage in the second case represents only a fraction of the family allowances (295 zlotys for three children).

The *Rumanian* system of wage taxes is much more simple, but it also combines progressiveness with some alleviation for family responsibilities. After the latest adjustments introduced in 1964, the exemption limit is 500 lei per month. The average tax rate is 5 per cent around 900 lei, 10 per cent around 1,400 lei, 13 per cent at 2,000 lei and the progressiveness stops at that level as the maximum tax rate remains below 15 per cent. Wage-earners with more than 3 dependants get a 30 per cent tax reduction and privileged categories ("people's artists", distinguished professors, etc.) benefit from special tax reductions. No further details on rates are available.

In the *Soviet Union* the exemption limit is at present 60 roubles and for certain categories 70 roubles, per month. Only the old rates which refer to an exemption limit of 50 roubles are available, but it is likely that the whole structure was raised by 10 roubles.

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[2] However, additional taxes are generally raised on combined yearly incomes above 96,000 zlotys.

[3] For workers in other sectors and employees, the rebates are 25 and 50 per cent respectively.

[4] The basic legislation was enacted in 1949. Exemption limits and rates were subsequently changed, but no rebates and additional charges were introduced for single and childless tax-payers, and this unbalanced somewhat the whole system.

Tranche of income (in roubles)	*Marginal tax rate*[a]		*Additional tax for bachelors and "small families"*[b]
50-60	36	(percentages)	36
60-70	10		6
70-100	12		6
above 100	13		6

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[a] For wage-earners with more than three dependants the tax is cut by 30 per cent.

[b] Single men between 20 and 50 years (above 25 years for students) and probably couples with no children.

It should be noted that the secondary incomes of wage-earners are taxed from 15 roubles onwards (if the main earnings are in excess of 60 roubles) and much steeper rates apply to private or self-employed earnings of liberal professions (e.g. doctors or lawyers).

It appears that the redistributive effect of the Soviet wage-ta system is limited to a few extreme categories (bachelors and ver large families) and is of significance only at fairly high wage levels On the other hand, the limited progressiveness of the wage ta makes it into an almost neutral instrument from the point of view of employment policy (unlike the scheme in eastern Germany) since the separate assessment of working husband and wife provides only a relatively small advantage. The absence of differentiation o tax rates by family size, combined with the virtual absence o family allowances (see text), is unique among the centrally planned economies.

APPENDIX TABLE 9.I

General provisions of pension schemes in eastern Europe and the Soviet Union

	Bulgaria	Czechoslovakia	Eastern Germany	Hungary	Poland	Rumania	Soviet Union
General regime for wage-earners							
Qualifying age (men) . .	60	60	65	60	65	60	60
Qualifying length of work (men)	25	25	15	25 [a]	25	25	25
Highest rates for lowest wages (percentages) . . .	80 + 2 % for each additional year up to 12 %	50 + 1 % for each additional year up to 10 %	Basic rate 360 DM per year + 1 % of total earnings of lifetime [b] + 0.50 DM per month for each year of work	50 + 1 % for each additional year worked after 1929	75	90 + 1.5 % per additional year of work. Maximum total 100 % or 1 200 lei	100
Lowest rates for highest wages (percentages) . .	55				45 at 2 000 zlotys + 15 % for the fraction above	60	50 (maximum 120 roubles)
Minimum monthly pension (national currency) . . .	60	—	120	—	500	250	30
Conditions for partial pension of wage-earner not qualifying for the general regime	Same age, half length of work and proportionately reduced rates	65 years 10 years work reduced rates	—	65 years 10 years work reduced rates	. .	20 years or 10 but 5 after 1944 reduced rates to the above minimum	. .
Allowances for dependants	Normal family allowances	Normal family allowances + a monthly pension of 100-300 Kčs for wife aged above 65	40 DM per child 15 DM for disabled wife	Normal family allowances	Normal family allowances	Normal family allowances	+ 10 % for one + 15 % for each additional dependant

Source: Information supplied by the International Labour Office.

[a] In the transitory period following the 1958 pension law, shorter waiting periods were admitted.

[b] Only the fraction of monthly wages below 600 DM is taken into consideration.

CHAPTER 10

THE PLANNING OF INCOME AND CONSUMPTION EQUILIBRIUM

INTRODUCTION

The balancing of demand and supply was not a prominent aim of economic policy in the centrally planned economies during the "take-off" conditions of the early development plans. Until around 1953 most eastern European countries experienced rising prices and general market disequilibria, in a period when the changes that were taking place in the allocation of resources as between investment and consumption were disproportionately large compared with the relative growth of nominal wages and labour productivity. Indeed, as was shown in Chapters 7 and 8, in a number of countries the increase in nominal wages was steeper than that in output per man. The comparable phase in development in the Soviet Union occurred in the period 1929-1936.

From the middle of the 1950s onwards more determined efforts were made in all the centrally planned economies to match global demand and supply, as the planning authorities generally adopted more flexible measures of adjusting the pattern of resource distribution to the requirements of market stability. Increases in the share of national income allocated to investment became generally less lumpy and more in line with the possibilities provided by decreases in unit costs of production;[1] and when output and productivity developed less favourably than planned, there was less insistence on persevering with investment plans.

Partial imbalances may exist in the absence of — as well as together with — a situation of general excess demand. However, it was only when global demand and supply had been brought into approximate balance in the centrally planned economies that problems of imbalance on particular markets began to attract much attention. The far-reaching measures undertaken recently with the aim of increasing the responsiveness of producers to market requirements, and of rendering the planning and management system more flexible, are in some measure the result of this shift of interest.

Balancing the purchasing power of the population with the supply of goods and services is a two-sided problem. It requires co-ordination of the purchasing power of the population with the value of goods and services available for sale, on the one hand, and the attainment of correspondence between the pattern of supplies and the pattern of effective demand, on the other. The former is essentially a problem that has to be resolved in the formulation of operational plans, mostly short-term, although it has also grown in importance as an issue of long-term planning. The latter arises in planning the structure of supplies and prices, and is equally important in short-term and long-term planning.

In this chapter the conditions and meaning of consumer-market equilibrium in the institutional setting of the centrally planned economies are first briefly defined. This is followed by an analysis of the balancing framework used for assuring co-ordination between the total value of supplies and effective demand for goods and services. The second section of the chapter deals with some problems of planning the structural co-ordination of income and consumption.

10.1 CONDITIONS FOR GLOBAL EQUILIBRIUM ON THE CONSUMERS' MARKET

The socialist sector of the economy is the preponderant source of generation of money income. Payments made by this sector to wage- and salary-earners, and to farmers through the purchase of agricultural products, are bound to reappear quickly as demand for goods and services supplied by state enterprises. Transactions within the remainder of the economy may transfer monetary claims from one social category to another (e.g. from wage-earners to the peasantry), thereby modifying the structure of demand, but they only marginally affect the magnitude of global monetary demand for consumers' goods and services. It follows that, in order to secure consumers' market equilibrium, the authorities must ensure consistency between the amount of cash payments from the socialist sector to households and the value (quantity × price) of the supply of goods and services in the state and co-operative retail trade network.

Disequilibria on the consumers' market in the centrally planned economies can be described as inflationary or deflationary, but — in contrast to market economies — such imbalances do not set in train "automatic" chain reactions throughout the economy as a whole. Thus, excess demand for consumers' goods and services does not necessarily affect investment and imports, since these expenditures are centrally determined, and the authorities may wish to maintain, at least temporarily, their original targets for either aggregate. Moreover, a rise in the prices of consumers' goods and services may simply reflect a central decision to use the price mechanism to correct a situation of excess demand. Such an increase may have no effect on wages or on the prices of other goods and services.

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[1] There were also important exceptions, however, the most notable being Bulgaria, where the rate of accumulation rose in 1959 from 19.2 to 31.6 per cent (at constant 1957 prices).

Earlier (in Chapter 8, section 8.7), the relationship between the growth of production and of income from employment was examined by reference to various patterns of changes in resource allocation, and on the assumption that the authorities set out to achieve equilibrium between consumers' demand and supplies. The conditions for such equilibrium are reconsidered below, but this time — in contrast with the treatment in Chapter 8 — the transfer flows between households and the government, as well as saving, are explicitly taken into account. The Polish data for 1957 are again used, supplemented by rough estimates made by the secretariat. The results are presented below in the form of a household account, which — since it is partly derived from input-output analysis — differs from the household account discussed later, inasmuch as the items of the latter account, which is actually used in planning, represent directly observable flows.

As in the input-output analysis presented in the technical note appended to Chapter 8, personal income from agriculture is considered as income from employment, and all investments are treated as being undertaken by the socialist sector. In fact, these assumptions would be more valid for centrally planned economies other than Poland, where agriculture is mainly in private ownership, but they do not significantly reduce the illustrative value of the account.[2]

Account for households in Poland, 1957[a]

Receipts		*Million zlotys*
1. Income from employment in productive activity $\left(\sum_{j=1}^{4} W_j\right)$		183.4
a. Private consumption (W_c)	126.5	
b. Collective consumption (W_s)	7.7	
c. Investment (W_v)	59.7	
d. *Less* import surplus (W_f)	10.5	
2. Income from employment in non-productive activity (W_5)		50.0*
Total income from employment		233.4
Expenditures		
3. Private consumption (C)		220.4
a. Income from employment (W_c)	126.5	
b. Profits (T_c)	93.9	
4. Net direct taxes		10.0*
a. Direct taxes (K)	26.0	
b. *Less* transfers (L)	16.0	
5. Savings (H)		3.0*
Total expenditures		233.4

The balancing item on the household account is personal saving. A major question at the stage of plan formulation is to establish whether the population, given estimated disposable income (the sum of items 1 and 2, *less* item 4), is likely to spend the planned amount on goods and services for consumption (item 3) — i.e. whether consumers will be prepared to save an amount corresponding to item 5. An inflationary gap will appear when the value of intended purchases is higher than the value of supply (at fixed prices) of goods and services; and the opposite situation means a deflationary gap.

The "income from employment" component of private consumption appears on the receipt side (as item 1*a*) as well as on the expenditure side (as item 3*a*) of the household account, and may therefore be ignored. The condition for equilibrium can then be stated in the form of an equation expressing the equality between income from employment *less* wages contained in private consumption (i.e. the sum of items 1 and 2, *less* item 1*a*) and the sum of profits (including depreciation and turnover taxes) obtained by the socialist sector from the sale of consumers' goods and services, net direct taxes, and saving (i.e. the sum of items 3*b*, 4 and 5). Put differently, the equation states that income from employment in the production of goods and services not destined for private consumption must be financed by profits on consumers' goods and services *plus* net direct taxes and saving.

If the preliminary balancing exercise indicates an inflationary gap, and the authorities do not wish to change the allocation of resources, it may be eliminated by altering the policy variables of the equation just described — profits, income from employment, and net direct taxes. Direct taxes are relatively unimportant in quantitative terms and — as explained below — transfers cannot easily be reduced. Profits and earnings, on the other hand, are strategic variables. As explained in Chapter 8, the planners can reduce the value of coefficient *b* — i.e. the ratio between the increase in average wages in productive activity and productivity. This will reduce the wage cost per unit of the various categories of final demand and, consequently, the wage bill. The decline in the wage costs per unit of private consumption would have as its counterpart an increase in the profit per unit of this component of final demand.[3] An alternative course on the demand side would be action to postpone an expected increase (if any) in wages and salaries in non-productive activity (item 2). In most centrally planned economies, this item accounts for a large part of the total income of the population.

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[a] See Appendix 8.I for an explanation of the methods used to derive the components of items 1 and 3. The symbols shown within brackets correspond to those used in Appendix 8.I. Item 2 (W_5) *less* the sum of items 4 (K-L) and 5 (H) is equal to the item net personal income from government (W_g) introduced in the Appendix as a balancing item on the implied household account.

[2] It should be emphasized that the data and estimates for Poland serve only to indicate the order of magnitude of the various variables, and that the subsequent analysis is concerned not with specific but with general problems of economic policy in all centrally planned economies.

[3] In the centrally planned economies, the profit margins on deliveries to collective consumption and investment are of no significance in this context, since the socialist sector acts in the double capacity of buyer and seller of these commodity flows (see the Technical Note to Chapter 8).

Alternatively, the authorities may decide to raise production beyond the original targets without expanding employment — by increasing productivity. However, this course will not restore balance unless the resulting increment in output is so composed as to shift resource allocation in favour of private consumption or unless the value of coefficient b is reduced.

Of course, the level of financial accumulation (i.e. profits *plus* turnover tax) on consumers' goods and services may also be increased by a rise in retail prices effected by, for example, higher turnover taxes. This is, in principle, a powerful weapon. In a country with an economic structure resembling that of Poland in 1957, a price rise of 2.5 per cent on consumers' goods and services would have the same economic effect as a 50 per cent increase in the amount of net direct taxes. This policy instrument was used by several countries at the beginning of the nineteen-fifties and again — to a much smaller extent — in recent years. However, the slightly rising price tendency in the latter period was often due to an improvement in the relative incomes of farmers rather than to the methods of financing collective consumption and investment. In fact, during the last ten years, most centrally planned economies have treated price stability as a major objective of policy; in other words, they have not been prepared to use the price mechanism to bring about global equilibrium on the consumers' market.

Disequilibrium on the consumers' market may be accepted during the process of plan construction, or it may unexpectedly appear when the plan is already operational. An inflationary gap may be reflected in involuntary holdings of cash and savings deposits by the population, i.e. in a larger increase in such holdings in relation to income than would be considered normal. A symptom of a deflationary imbalance, on the other hand, is increased stock accumulation at the retail level.

Symptoms of this kind, however, do not always lend themselves to statistical measurement.[4] The factors accounting for a rise in cash and savings deposits are so complex as to render difficult the separation of "voluntary" from "involuntary" holding of balances. The appearance of the latter can generally (but not always) be inferred from an increase in "uncontrolled" prices, or in prices paid in goods and services transactions among households. But as long as involuntary savings are not associated with a desire to pay higher prices than those prevailing in state and co-operative trade, they escape precise identification.[5]

The appearance of an inflationary gap is usually associated with a decline in commodity inventories in relation to retail turnover, although not all stock reductions can be taken as a symptom of imbalance. A decline in inventories in relation to sales can be caused by more efficient distribution. It can also reflect a planned drawing down of reserves specifically created to meet fluctuations in demand, and thus to assure market equilibrium. This also holds true of an increase in the *rate* of inventory accumulation. Inventory policy forms an integral part of investment and economic policy and changes in stocks may be considered as a legitimate tool for achieving market equilibrium rather than as a symptom of disturbance.

Another difficulty stems from the fact that the above description does not set out all the conditions in which global equilibrium between demand and supply can be achieved. Global equilibrium may be said to represent the sum of partial equilibria, and the consumer market cannot be characterized as stable if serious maladjustments exist between the pattern of supply and demand for particular categories of goods and services. Conversely, it is only exceptionally that equilibrium in the market for an individual commodity or group of commodities will be maintained if there is a pronounced global imbalance.

The authorities may choose to combine an increase in nominal wages with an increase in the price level in order to improve the wage and the price structure simultaneously. A decrease in the price level, on the other hand, may reflect a decision by the authorities to improve real wages by means of price reductions rather than by an increase in nominal wages. The choice between these two methods may depend on whether the authorities are at the same time pursuing other objectives such as an improvement in the wage and price system. The hazards of interpreting price increases as symptoms of inflationary tendencies, and price decreases as symptoms of deflationary tendencies, may be illustrated by the fact that in the past falling prices have often been accompanied by excess demand on the consumers' market. Indeed, the price reductions carried out in the Soviet Union during the years 1947-1954 and in other eastern European countries in the period from 1953 until around 1958 often went too far by creating a situation in which demand exceeded supply at the reduced prices.[6]

An inflationary situation may, in sum, be described as one in which it becomes impossible, at prevailing prices, to satisfy demand from current production, imports, and the reduction of stocks. In conditions of fixed prices, excess demand manifests itself first in the appearance of an inflationary gap, which may or may not be followed by an increase in the price level in state and co-operative trade, but which will generally be reflected in an increase in uncontrolled prices. As long as the gap persists, effective demand cannot be realized (although purchasing power is kept intact).

By analogy, a situation of inadequate demand in relation to supply can be considered as deflationary. On a global scale, such a situation might arise when, for instance, the relationship between labour productivity and wages develops more favourably than envisaged in the plan. Obviously, the problems created by such a situation are less important than those due to inadequacy of supply; for the authorities can in principle augment effective demand, either by reducing prices or by increasing nominal incomes. However, problems of structural maladjustments may in such cases limit the freedom of manœuvre of the authorities in making the necessary changes in the price structure and hence in striking a new balance between the pattern of supply and of demand.

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[4] A penetrating analysis of the meaning and conditions of global equilibrium in a centrally planned economy is given by M. Kucharski in *Zeszyty Naukowe*, No. 35 (issued by the Polish Planning Institute).

[5] Even though precise identification may not be possible, however, the data on saving may indicate the presence of an inflationary gap. See Chapter 8, p. 59.

[6] In considering price policies, it should be borne in mind that it is usually difficult to increase equally the income of the various population groups in order to compensate for a rise in prices. Moreover, a change in the overall price level is easily associated with a change in relative prices, which similarly affects the distribution of real incomes between various population groups.

Finally, the co-existence of excess demand in some markets and shortages in others might be described as a "mixed" situation. Thus, in recent years, pressure for price increases on some markets has often co-existed with pressure for price cuts in others. Prices of some commodities — such as meat, etc. — have frequently been raised as a result of inadequacy of supply. The effect has been that the price level rose in the inflationary sense, while at the same time deflationary tendencies showed up in the form of excessive inventory accumulation, often necessitating curtailment of production and leading in some cases to downward adjustments in prices.

10.2 THE BALANCING FRAMEWORK AS SEEN FROM THE HOUSEHOLD ACCOUNT

The composition of the total income of the population was described in Chapter 7 (see Table 7.7), where social benefits in kind were seen to have accounted, in most of the centrally planned economies, for some 15 per cent of the total income of households. Depending on the level of industrial development and monetization of agriculture, the share of farm income in kind has amounted to between 5 and 15 per cent. Thus, taken together, both incomes and social benefits in kind have accounted for between 20 and 30 per cent of the total,[7] leaving 70-80 per cent as freely disposable cash income.

By definition, social benefits and incomes in kind are self-liquidating items, in that they represent a source and use of resources at the same time. They do not directly give rise to any balancing problem. Both flows are important from the point of view of planning supply and demand equilibrium only in so far as changes in their relative importance or structure may bring about changes in the pattern of effective demand.

The cash income of the population preponderantly derives from transactions with the socialist sector. The available data for Poland indicate that such transactions account for about 85 per cent of the gross money receipts of the population; and the proportion is apparently not much different in the other countries.[8]

The principal schemes used in planning global consistency between supply and demand on the consumers' market are the "balance of money income and expenditure of the population" and the "aggregate financial balance". Both accounts are usually prepared by the Planning Commission in conjunction with the annual national economic plan.[9] They depict the sources and uses of household and socialist-sector funds respectively, the former being defined to include households as both consuming and producing entities, and private small-scale enterprises; the latter comprises state and co-operative enterprises, government and financial institutions.[10] In addition to showing transactions between the household and the socialist sectors, the balance of income and expenditure of the population usually also shows

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[7] It should be noted that with the decline of the share of agriculture in the national income, and with the increased degree of monetization of agriculture, the relative importance of agricultural income in kind tended to decline sharply throughout the 1950s. The reverse has been true of social benefits in kind. On balance, the relative importance of income in kind has apparently declined, except in such countries as Czechoslovakia and eastern Germany, where the share of agricultural income in kind was already very low at the beginning of the period.

[8] The data for Poland appear to have the widest coverage (see footnote 11). Those for other countries restrict the scope of money receipts by the household sector by including only income from sale of agricultural produce and income of small-scale private establishments. The latter two items amounted to 9.4 per cent in Hungary in 1964 and 5.3 per cent in Bulgaria in 1957 of money receipts from the socialist sector. A correction for the missing types of transactions within the household sector — such as the provision of services by various craftsmen and professional people, the subletting of rooms, re-sale of goods, remuneration of domestic servants, etc. — would apparently have the effect of raising the Hungarian ratio to a level close to that of Poland. In Bulgaria, transactions between households apparently account for a smaller share than in the other two countries. The data for Poland are also interesting in that they provide a breakdown of transactions by socio-economic groups. As can be seen from the figures below, the distribution of receipts and expenditures between the socialist sector and the private sector differs considerably from one socio-economic group to another. The proportion of income derived from the socialist sector ranges from as much as 96 per cent in the category of hired personnel, pensioners, etc., to only one-third in the category of craftsmen, traders and similar independent bodies taken as a group. Similar — although less pronounced — differences between the above two groups are apparent on the expenditure side.

The position of the peasantry is intermediate as regards the sectoral structure of money receipts. Characteristically, however, the share of the socialist sector in the expenditure of this group is higher than in any other, reflecting the relatively large weight of industrial goods in total purchases.

Poland: The structure of money receipts and expenditure of the population by type of transactor, 1957-1958

Percentages

	Recipients of wages, rents and stipends	*Farmers (individual and collective)*	*Private handicrafts and professions*	*Total*
Total money income . . .	100	100	100	100
from socialist sector . .	96	81-83	31-33	85-86
from private sector . . .	4	17-19	67-69	14-15
Total money expenditure .	100	100	100	100
to the socialist sector . .	86-87	89-90	68	85-86
to the private sector . .	13-14	10-11	32	14-15

Source: Wiadomosci narodowego banku polskiego, No. 9, 1960, p. 431.

[9] In some cases long-term and quarterly accounts of the "balance of the money income and expenditure of the population" are also prepared. Recently some countries have begun to prepare this plan on a regional basis also.

[10] The line of demarcation between the socialist and household sectors is not drawn consistently in the various countries, some countries including collective farms in the socialist sector (Hungary), others including them in the household sector (Poland).

TABLE 10.1

Account of the "Balance of gross money receipts and expenditure of population" from and to the socialist sector

Percentages of total

Receipts	Poland (1961)	Hungary (1961)	Bulgaria[a] (1957)	Expenditure	Poland (1961)	Hungary (1961)	Bulgaria[a] (1957)	Eastern Germany (1960)
Wages and wage-like payments	59.4	67.1	55.4	Purchase of goods	74.4	82.7[d]	77.5	68.5
Pensions	4.1	5.9		Purchase of services	6.3	4.5	7.6	10.5
Stipends	0.3	0.2	22.3[b]	Taxes and fees	5.8	6.1[e]	6.7	6.2
Sickness benefits and other allowances	3.8	6.5						
Sales of agricultural products	20.1	7.0	7.4	Repayment of credits	4.9	2.9	0.8[a]	8.5
Cash distributed by collective farms		4.1	14.4	Miscellaneous other	6.2	2.3	3.2	
Sales of goods and services by private handicrafts and trade	3.1	1.5		Savings	2.4	1.5	4.2	6.3
Credit receipts	5.4	3.6	c					
Other receipts	3.8	4.1	c					
Total receipts	*100.0*	*100.0*	*100.0*	Total expenditure	*100.0*	*100.0*	*100.0*	*100.0*

Source: *A nemzeti jövedelem és a lakosság életkörülményei*, 1964, p. 78; *Gospodarka Planowa*, No. 9 10, 1962, p. 3; *Bulgarian Yearbook 1959*, p. 70; *Volkswirtschaftsplanung*, No. 13, 1962, p. 107.

[a] Credits are shown on a net basis on the expenditure side of the account, and the figures are therefore not fully comparable with those for the other countries.

[b] Probably includes all other receipts.

[c] Probably included with the items under footnote *b*.

[d] Including material services (transport, communications, gas, etc.).

[e] Including social security contributions.

transactions within the household sector separately, as Part B of the balance, to distinguish it from Part A dealing with flows between the household and the socialist sectors.[11]

Table 10.1 assembles data for some countries on Part A of the balance of income and expenditure of the population. Notwithstanding some errors introduced by differences in coverage, the figures indicate a broad similarity when allowance is made for such factors as variation in the level of industrial development or in the degree of monetization of agriculture. Thus, largely because of these factors, the share of wages and wage-like payments in the total receipts of households from the socialist sector ranges among the countries listed from 55 to 67 per cent. The share of receipts from agricultural and handicraft activities varies inversely — from 12 to 23 per cent. Thus, over three-fourths of all receipts consists of income from work performed directly in, and for goods and services sold to, the socialist sector. Social benefits in cash make up 8 per cent in Poland, 12 per cent in Hungary, and apparently a rather higher percentage of the total in Bulgaria. Credits receipts amounted in the two former countries to around 5 per cent, and other receipts, including insurance compensation, etc., to a further 4 per cent. On the expenditure side, by far the most important item is the purchase of goods, which accounts for 75-80 per cent of the total. Expenditure on services accounts for 6-8 per cent and individual taxes and fees for 6-7 per cent. Credit repayments are only slightly lower than credit receipts, producing everywhere an insignificant net addition to disposable income.[12] The remaining expenditure items, under the heading "miscellaneous", are important only in Poland, where they account for 6 per cent of the total.

Since wages make up the bulk of the money income of the population, success in maintaining market balance depends greatly — as already mentioned — on the ability of the central authorities to adjust the increase in the wage-fund to the rise in output and on the allocation of the latter between consumption and non-consumption expenditure. Pressures can arise either because of failure during plan formulation to match the size of the wage-fund with planned shifts in the pattern of production and its utilization (owing to the rigidity of institutional arrangements for wage determination at the micro-economic level) [13] or as a result of a higher than planned increase in the wage-fund. As pointed out in Chapter 8, the difficulty of keeping the growth of the wage-fund under control has often contributed to the appearance of inflationary pressure. This was because for most of the period under review methods of controlling wage-fund expenditure were tied, as a rule, to "performance indicators" which were not difficult to manipulate. Moreover — a factor of outstanding importance — enterprises were often able to exceed both employment and average-wage plans with impunity; as their own resources were insufficient to cover the resultant costs, the supervisory authorities were left with little option but to foot the additional bills. The tendency of enterprises to exceed wage-fund plans — mostly due to the ambition to meet output goals and sometimes to competitive bidding for labour — has sometimes also resulted from labour pressure for wages higher than those laid down in the plan. To the extent to which such pressure may itself have been provoked by previous price inflation (as in Poland, for instance, throughout most of the period), the familiar price-wage spiral contributed to an "over-fulfilment" of wage-fund plans.

A related factor strengthening the tendency for wage plans to be exceeded was the need to change wage relatives and to adjust them to the requirements of the physical output plan. Planned revisions of the wage system, even if successful in aligning the structure of wages to the requirements of production and the efficient allocation of labour resources, can take place only periodically. In the intervals, however, changing requirements give rise to wage "drift" which cannot be accommodated in the plan. Generally, the authorities in the centrally planned economies have found it necessary to preserve some flexibility in respect of wages and other cost items at the enterprise level, in order to compensate for the errors and oversights which are inevitable in plan formulation. This partly explains their inability strictly to control the size of wage expenditure.

Planning the size of cash income in agriculture is more complex, since changes in the prices paid for agricultural deliveries cannot be accurately foreseen when the plan is formulated. The circumstances requiring periodic reforms of delivery prices were in many respects similar to those leading to reforms of the wage systems. Even the most rational system of delivery prices will sooner or later become obsolete as a result of shifts in demand and changes in the relative costs of production. But, in practice, no price structure is flawless and the errors which it incorporates must be corrected, and other modifications become necessary as circumstances change. Theoretically, modifications are possible in both directions — upward and downward — but in practice it has often been difficult to counter-balance increases in the price paid for some products with a corresponding crease in the prices of others; the unit cost of purchases s consequently turned out to be higher than originally ntemplated.

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[11] The coverage of transactions within the household sector differs from one country to another, partly on account of the difficulty of obtaining data on certain types of transactions. Thus, for instance, Bulgarian practice is to record only the sale of agricultural products on farmers' markets and the output of handicrafts. In Hungary, data on some types of services are also included, especially those provided to households by private small-scale establishments. Some data released for Poland also include estimates — e.g. of services rendered on a private basis by members of various professions, rental income, etc.

[12] The importance of credits cannot be measured solely by the extent to which the credit balance adds or subtracts from the population's global income. This is because the cancelled part is not "neutral" with respect to the size of household expenditure in relation to income, nor with respect to the structure of the expenditure (see discussion below).

[13] This most frequently occurred in the early development plans when, on the one hand, planned shifts in the pattern of production required shifts in the pattern of employment in favour of sectors with relatively high wages (construction, heavy industry) and, on the other hand, shifts in the utilization of the national income in favour of non-consumption expenditure were on such a scale as to preclude — given the wage and premia system — co-ordination between the envisaged rise in the wage-fund and the planned increase in the availability of consumers' goods. In these conditions the plan itself was apt to contain an inflationary gap.

The wide fluctuations in agricultural production from ar to year and the consequent difficulty of accurately sessing in advance the size and structure of forthcoming ricultural deliveries raises a different type of problem. the planned growth of agricultural production is set o high, shortages may ensue and the income of the ricultural population will show a deficit. And since e supply of industrial goods to the farm population ll have been planned at the higher level, the structural nbalance will be aggravated. If, on the other hand, a nservative target for agricultural deliveries figures in e plan — as has become the practice in a number of untries — the likelihood is that the actual level of rm income will exceed the planned level. While the fect of such an excess may be mitigated by the greater an planned supply of foodstuffs to the urban population, e problem of structural maladjustment remains. These ovements are only partly moderated by the opposite ovement of free market prices and, exceptionally, by me variation in the prices paid by the state.

Changes in the other categories of income originating the socialist sector and moving towards the population e under stricter control and cause few problems of an formulation and implementation. The most impornt items here — social security and family allowances — e statutory in nature, and although the rate of payment n be varied, reductions are difficult to effect. Moreover, ch payments automatically rise with the number of eneficiaries which, in turn, depends on demographic d other changes over which the planning authorities ve little influence.

In terms of planning flexibility, credits extended to the opulation — mostly for housing construction, but to increasing extent for the financing of consumers' urables — are a different case.[14] As the volume of the tter, in particular, can be changed at short notice, edit policy provides a potentially powerful lever for gulating the level of market demand. Hitherto, however, e role of credit has been primarily to influence the ructure of demand, rather than its volume. By providing edits for the purchase of selected commodities, the thorities have aimed at shifting demand away from eficit commodities towards those in adequate supply.[15]

Changes in the supply of marketed goods and services epend on changes in production and imports and on the ossibility of shifting supplies between investment in the cialist sector, social consumption and exports, on the ne hand, and those entering the retail market on the her. If an excess of demand over supply appears when e plan for the money incomes and expenditure of the population is drawn up, the gap can be reduced by measures changing any of these variables. If imports can be raised without expanding exports, or if the supply of marketed goods is increased by reducing supplies to the socialist sector, no further measures ought to be necessary for closing the account. The situation is different if an increase in production of marketed goods and services is required. In so far as such an increase calls forth a rise in the wage bill or in other payments for goods and services supplied by the population to the socialist sector, it simultaneously augments household demand. Consequently, the planned increase in production must be correspondingly larger than the originally projected gap.[15a]

The bulk of goods and services sold by the socialist sector to the population consists of items of personal consumption, but a part also enters the production and investment expenditure of the private sector. This distinction is important for market balance, because there is usually greater scope for shifting supplies of intermediate and of investment goods between the demand of the socialist sector and the demand of the population than is possible for goods used for personal consumption. It should be added, though, that a large part of public expenditure consists of purchases of consumer items,[16] while on the other hand part of household expenditure on consumption consists of goods which can be utilized for productive purposes within the socialist sector.

The importance of the distinction goes further. Private investment that is financed from the population's own resources (i.e. without the help of state credits) allows part of the investment burden to be shifted on to the household sector without restricting the growth of that sector's income. It frequently adds to total resources available for investment by mobilizing — particularly in the countryside — unused labour resources and often stimulating local production of construction materials. It generates important initial cash savings and also — by introducing a free market for dwellings and, in certain cases, for land — strengthens the propensity to hold cash balances.

On the supply side, difficulties in meeting the plan for consumer-goods production have been by far the most important factor disrupting the plan for market balance. In the past such difficulties were frequently the result of shortfalls in agricultural production. While failure to reach plan targets in those branches of consumer-goods production that are not dependent on agricultural supplies was less frequent, there has been a persistent tendency towards greater relative fulfilment of plans for producer-goods output,[17] which has reinforced the effect of shortfalls in agricultural production. For, as a rule, this tendency was accompanied by over-fulfilment of investment plans or at least by smaller shortfalls in such plans than in those for consumption, with the result that the share of non-consumption expenditure in national income was higher than originally envisaged.

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[14] Credits are also extended to private small-scale producers and aders. Advances against the delivery of agricultural produce are so gaining in importance.

[15] Although this is not the only explanation of the low volume of edit extended to the population, the emphasis on this feature of edit policy has certainly been a contributory factor. It is obvious at the use of credit as a means of influencing the level of total demand ould require its share of total demand to be much greater.

[15a] See also the discussion of the "multiplier" effect in Chapter 8, p. 54.

[16] Included here are expenditures for the upkeep of hospitals, nurseries, old-age homes, as well as the pay and allowances of the armed forces.

[17] One reason is apparently the fact that investments in the producer-goods sectors are more sheltered from pressure than those in the consumer-goods sector, as a relatively larger part of such investments consists of large-scale, centrally financed "priority" projects. Also, producer-goods industries are less vulnerable to restrictions on imports than, say, the light industries which are

Little need be said about the remaining expenditure items of the household-sector account. At given rates, the amount of wage taxes depends on the wage bill, and although the rates can, in principle, be varied in both directions, the practical importance of this instrument as a means of regulating the level of consumer demand has been very small.[18] Credit repayments are a readily projectible item. Other miscellaneous items comprise the compulsory or semi-compulsory counterpart of services (net insurance premia) or of social activities (membership fees) and in part the net payment for lotteries, football pools, etc. Given the relative stability of the behaviour of the population in such activities, these expenditures can be forecast quite easily, as they increase relatively slowly from year to year unless the rates are changed or new outlets (e.g. new forms of voluntary life insurance) are created.

By contrast, the elements determining the magnitude of voluntary money saving[19] (defined to include all savings in the form of money balances whether in cash, deposits, etc.) are very complex and consequently difficult to forecast with precision. The expansion of money saving is primarily related to increases in the level of household income, but also to economic expectations. Thus, expectations of shortages or of forthcoming price increases may lead to drastic reductions in money balances, while expectations of a general improvement in the market situation or of reductions in the price level produce the opposite effect. Since the propensity to hold cash is much stronger among peasants than among wage-earners, fluctuations in agricultural production can greatly affect the rate of household savings. Moreover, in the past the authorities in the centrally planned economies have found it difficult to trace the effects of various measures, whether affecting the composition of household income on a global level or the earnings of individual income recipients, on the distribution of family incomes and the pattern of expenditure of these incomes. They have consequently had to work with only a very vague estimate of the size of forthcoming savings.

In view of the difficulties of separating increases in money balances deriving from changes in the propensity to save from more volatile money hoarding reflecting structural and overall disequilibria, the authorities in the centrally planned economies have tended to identify voluntary money savings with changes in savings-bank deposits, and to view with disfavour any increase in cash held by the population. In fact, considerable efforts have been made to induce the population to switch from cash holdings to bank savings.[20] A method of simultaneously increasing both the rate of voluntary saving and its predictability has been to tie bank deposits to specific purposes — such as the purchase of certain durable goods, or the acquisition of co-operative housing. Clearly, however, this method can only be successful if shortages exist and are expected to continue for some time. Its usefulness diminishes as shortages disappear; this is indicated by the fact that certain consumers' durables (for instance, television sets and refrigerators), to which it was possible to tie savings in a number of countries until quite recently, have now become objects of finance through purchase credit.

As the data on money savings presented in Appendix Table 10.I refer to *ex-post* changes in money balances, caution is required in using them as an indicator of inter-country variations in the rate of voluntary money savings (for the magnitudes shown may reflect sums retained not because of a wish to save but because of an inability to spend). This qualification made, the figures are nonetheless quite revealing. The importance of money savings is rather small in all countries, because per capita income is still relatively low and because private incomes consist almost exclusively of income from work. Moreover, the wide range from one country to another can only partly be explained by the fact that the figures refer to rather different time periods.

Data on changes in money incomes and savings over time are available for only three countries, and Chart 10.1 (see page 10) shows that the ratio of money savings to money income fluctuated greatly from year to year in each of them. A definite upward trend is discernible in eastern Germany until 1960, followed by a decline and a recovery since then, and in Hungary and Poland through most of the period, particularly in recent years. The chart also shows changes in the total value of money balances in relation to income. The ratio of money balances to

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more import-dependent. A not unimportant factor may be that heavy industries in a system of centralized planning are in a more advantageous position, as they find it easier to impress on the authorities their relatively few but costly needs than do the light industries whose needs are more numerous, although as a rule less costly (see, for instance, Bobrowski in *Gospodarka Planowa No. 3*, 1964). Finally, with the possible exception of the export sector, producer-goods industries have had fewer problems of adjusting the structure of output to the pattern of demand and have suffered less from temporary cuts in production due to excessive inventory accumulation and similar difficulties which beset the consumer-goods industries.

[18] For a description of the wage-tax system, see Chapter 9 and the Appendix to that chapter.

[19] For analytical purposes, voluntary cash savings may be divided, according to the purpose for which they are held, into (*a*) balances kept by wage-earners and similar income recipients for purchases between pay days; (*b*) those kept by the peasantry and other small-scale producers and traders for operative purposes as well as with the aim of acquiring consumers' goods between points of time in which production is realized; (*c*) balances kept for the purpose of acquisition of relatively inexpensive items, whose price exceeds, however, that which the income recipient can afford from the income of any one income period; (*d*) balances kept for the purchase of expensive items such as houses, cars, etc.; (*e*) balances kept for unpredictable occurrences and old age. While from the viewpoint of the individual the balances mentioned under (*a*) to (*c*) can hardly be considered as savings, from the global viewpoint these are little different from those mentioned under the last two items.

[20] Another outlet for savings in some countries are freely cashable government bonds. These, however, play a much smaller role than would be expected — apparently owing to the lack of popularity of earlier bonds, the use of which was governed by the notion that their disincentive effect was smaller than that of taxation.

oney income is seen to have more than doubled between 55 and 1964 in eastern Germany, and to have risen at even steeper rate in Hungary and Poland. In eastern ermany it reached the level of 44 per cent in 1964, and the latter two countries 24 per cent and 23 per cent spectively.

Although the available data for the other countries e less complete, they suggest rather similar conclusions ee Appendix Table 10.I). Generally, the growth of oney savings was related to the growth of income.[21] owever, this relationship holds true only in a very general way — the actual proportion between the two variables in the various years having been too irregular to provide any practical guidance for the projection of savings in any plan period. Moreover, the considerably higher growth rate of money balances than of income has resulted everywhere in a significantly large ratio of money holdings to income. While this does not imply any threat to market stability in normal circumstances, it is nonetheless of considerable consequence. It renders more imperative the need to maintain market stability and to avoid policies which may weaken the propensity to save; for any lack of confidence, whether due to justified or unjustified expectations regarding future market disturbances, may not only reduce voluntary savings but also lead to considerable dissavings, thus cumulating imbalances and aggravating an already strained market situation.

10.3 THE BALANCING FRAMEWORK AS SEEN FROM THE PUBLIC SECTOR ACCOUNT

The "aggregate" financial plan is, as was seen, an ccount of the sources and uses of the funds of the ocialist sector.[22] As such, the link between it and the balance of the income and expenditure of the popution" is plain: the increase in the money savings of the opulation is the balancing item of both accounts. This eans, in other words, that the net money saving of e population is identical to the increase in indebtedness the socialist sector — excepting the part accounted for an increase in foreign indebtedness. Since the increase the indebtedness of the socialist sector is strictly lated to the increase in the money reserves held by e population, its magnitude in relation to the amount at the population is actually willing to save is of articular interest.

Essentially, the aggregate financial balance is a plan r the financing of social consumption and capital rmation. Since practically all social consumption is udget financed, this item poses few problems of impleentation. Fulfilment of the plan for fixed investment and, *fortiori*, for stocks formation is different. This is so, rstly, because in spite of the high degree of budgetary ontrol over investment funds, the resources made vailable to enterprises for financing fixed investment ave often exceeded those written into the plan, so as to nable enterprises to complete projects whose cost turns t to be greater than envisaged. Secondly, the state entral banks have often been unable to prevent an overlan expansion of inventories by curbing short-term credit financing. Some of the reasons for their failure in this respect are enumerated below.

One of the functions of the banking system in the centrally planned economies is to control the quantity and allocation of short-term credit; but the institutional setting has limited the role of the credit system in influencing the purchasing power available to enterprises or the population. At best, regulation of the level of demand by means of monetary instruments has had an auxiliary function, serving to effect rather marginal improvements in the balance of global supply and demand.

In these conditions, full employment or price stability could not be matters of direct concern to the banking authorities. The levels of employment and of production, and their structure, are laid down in the national economic plan and the role of the banking system has been to adjust financial relationships in such a way as to assure the attainment of the planned "real" relationships. If difficulties arise in the real sphere of production and distribution during a given plan period, the banking system by itself cannot correct them: the responsibility of the banking authorities is to make the necessary monetary adjustments and to inform the central planning authorities that corrective measures need to be taken. More generally, it has been said that, in so far as the legitimacy of any money transaction can be checked by testing the desirability of the underlying physical flows, the banking system in the centrally planned economies does not control physical flows by regulating money flows, but rather the opposite — the banking system controls money flows by reference to physical flows. But, since the relationship between financial and physical processes is complex, it has usually been difficult to distinguish the desired from the undesired processes so as to restrict the latter only.

Another, and closely related, reason for the weakness of banking control is the difficulty which banking authorities have in limiting credit when other expenditures related to production, over which they have little influence, are exceeding the plan. The bank may refuse to

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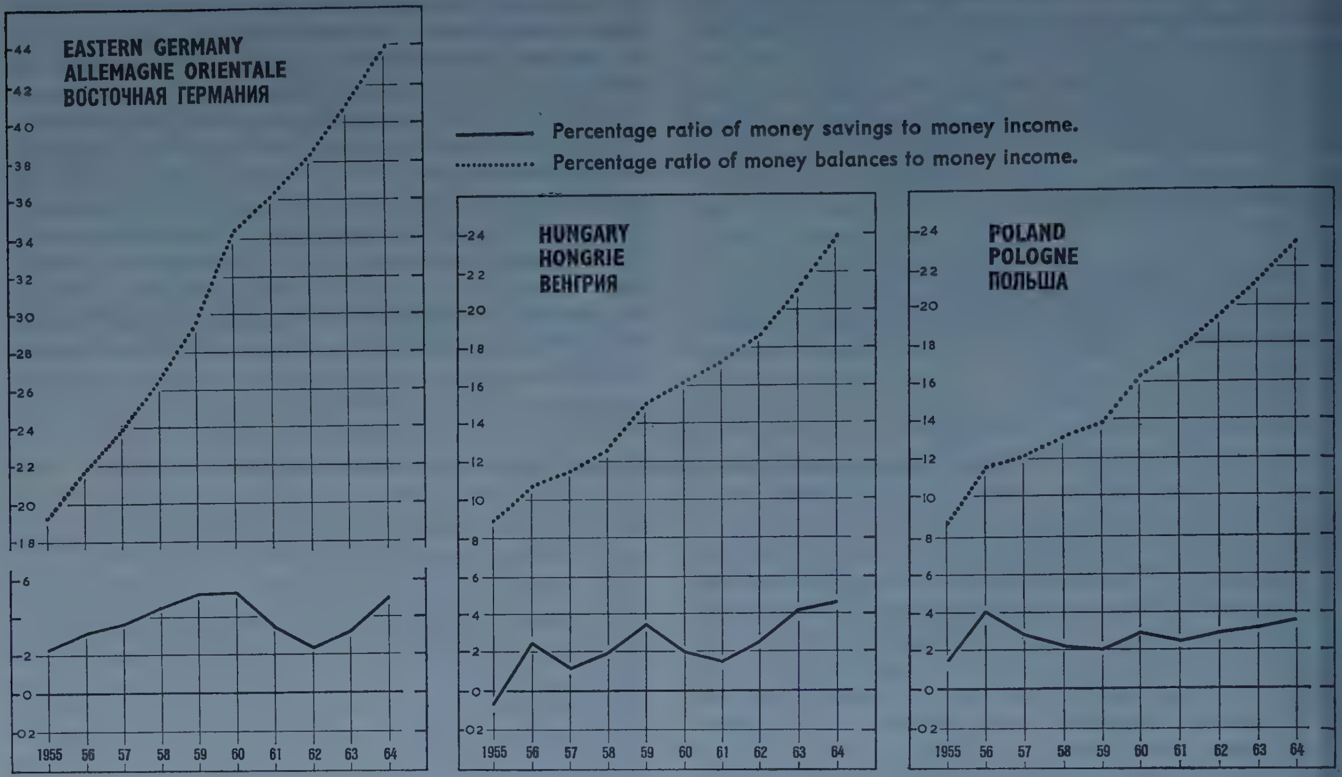
[21] This relation should not be identified, however, with the overall vings ratio, since the data on income, when available, include the edit balance, and the data on savings are restricted to the increase money balances, i.e. they exclude investment financed from own sources.

[22] For a fuller description of this balance, see *Economic Planning Europe*, *op. cit.*, Chapter IV, pp. 30, 31. The expenditure side of e balance includes collective consumption and investment ($S + V$), e "government" wage bill (W_5), transfers to the population (L), d net credits granted to the population (R). The receipt side records ofits (including depreciation and indirect taxes) originating in the terprise sector $\sum_{j=1}^{4} T_j$, direct taxes paid by the population (K), t foreign credits obtained (not necessarily equal to the foreign ade balance F), and the increase in the population's holdings of sh and deposits ($Q = H + R$). The symbols in brackets correspond to those used in Appendix 8.I.

CHART 10.1

Money savings and money balances as percentages of money income



Sources: A nemzeti jövedelem és a lakosság jövedelme, 1962 to 1964; *Finanse,* No. 9. 1960 and No. 9, 1962; *Gospodarka planowa.* No. 12, 1965; *Studia Ekonomiczne* No. 7; and for eastern Germany direct communication to the secretariat.

extend credit, but it cannot prevent delays in credit repayment or delays in the payment by the enterprises of assessed contributions to the government budget. Hence, any stock-building or above-plan investment usually also finds its source of finance. Since the working capital resources of the enterprises themselves have traditionally been held at a low level in the centrally planned economies in order to increase banking control, the bank has no option but to finance additional enterprise outlays. As wages have already been paid, the alternative would be to stop other payments, thus causing interruptions in supply and breakdowns in production. The difficulties described above were aggravated in the past by the tendency of enterprises to overspend on wages and thereby run into shortages of profits and, eventually, working capital.

It follows that it is the budget, rather than the banking system, which is called on to correct imbalances that arise during the process of plan fulfilment. If inflationary (or deflationary) consequences of plan shortfalls or overfulfilment are to be avoided, the government budget must be elastic enough to be able to offset them. The banking authorities can and do maintain constant supervision over the money income and expenditure of the population,[23] but they can do little once relationships deviate from those envisaged in the plan. It then falls on the budget to provide corrections by intervention by the authorities to change its balance — by running a larger or smaller surplus than originally intended.

Largely as a result of the highly centralized system of financing of investment and inventory accumulation in the centrally planned economies, the budget plan as a rule has had to be closed by a considerable surplus balance in planning for market equilibrium. In trying to maintain a large degree of centralized control over the activities of enterprises, the authorities have tried to hold retained enterprise profits — and hence their own resources for financing fixed investments and inventorie — to a bare minimum. The money saving of enterprise and of the population has as a rule been smaller tha the amount of credits provided by the banking syste for financing working capital. And the budgetary surplu has had to be large enough to balance the total amoun of monetary savings with that of credit. Failure to achiev balance, or an increase in bank credits exceeding th increase in balances of enterprises and the population,[24] s meant that new currency has had to be brought into rculation, and (since the amount of currency held by terprises is negligible) that the increase in cash holdings the population will be larger than it is willing to hold. n the other hand, a larger surplus than is required by e indicated conditions has meant a reduction in the nount of outstanding currency and the appearance of eflationary pressures.

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[23] This is accomplished by means of the "cash balance" which is drawn up quarterly by the central bank. Except for the fact that wages and salaries are recorded on a net basis (i.e. after deductio of wage taxes), the cash balance is the counter part of the balanc of the money income and expenditure of the population.

[24] The fact that savings deposited by the population in bank enter the government budget rather than the resources of the centra bank does not change the relationships described, except for th effect that the budgetary surplus is formally overstated.

Thus, the need to run a budget surplus is seen to arise om two different sources. There is, first, the necessity create reserves which act as buffers in offsetting the npact of plan deviations on the maintenance of market alance. If such reserves are built into the plan, it means at the plan for market balance is conservative, and if evelopments proceed according to plan there will be possibility of raising overall expenditure in real terms y increasing personal consumption, social consumption investment above the planned rate. The equivalent f such reserves in real terms are unallocated producers' consumers' goods from current production or imports, hich are then either "dissolved" in the process of plan ılfilment, utilized for exceeding the plan target, or ventually added to the stock of inventories for future se. In the second place, there is the need to offset the nticipated shortage — in relation to the envisaged equirements for credit extension — of money savings by nterprises and the population in accordance with the lan for financing fixed investment and inventory form- tion.[25] Plainly, these reserves, unlike those mentioned bove, do not represent freely disposable resources, nce their "real" equivalent has already been built into ne capital formation plan. As the utilization of these eserves has already been determined, the importance of nis item for market balance would appear to be no diffe- ent from that of any other item of budgetary expenditure.

In planning practice, the former type of reserves are ommonly referred to as "special current reserves", guring as an item of expenditure, whereas the latter ype are referred to as "surplus", figuring as a balancing em of the budget. Clearly, only the special reserves can e considered as a tool for correcting market imbalances.

In sum, while both monetary and non-monetary actors influence the conditions of market equilibrium, ne latter are more important. On the monetary side, ne grant of working capital to enterprises in excess of ne requirements of inter-enterprise goods turnover has been a source of disequilibrium on the consumer market by permitting higher than planned wage payments and inventory formation. On the other hand, lower than planned savings or the sudden appearance of dissaving (drawing down of cash balances) have not, as a rule, been a factor of disturbance in recent years. Non-monetary factors have affected both the size of consumer demand and supply, difficulties in reaching targets for consumer-goods production and for productivity and wages being among the most important of such factors. The tendency to exceed employment and wage plans has been by far the strongest element raising consumer demand above the planned level. On the other hand, the supply side of the balance has often been adversely affected by failure to achieve planned increases in agricultural output.

Pressure on wage costs has sprung from many sources. As a rule, the planning authorities have found it difficult accurately to plan increases in productivity, although its importance for planning market balance is great. The recorded increases in output per man have generally been lower than planned, while the opposite has been true of employment targets. Higher employment rates than planned have frequently been accompanied by higher than planned increases in wage rates, both being made possible by shortcomings in the system of wage control. Unexpected increases in agricultural delivery prices at the beginning of the plan period have often had similar effects to those of above-plan wage increases. Such increases have sometimes been unavoidable because long-standing disproportions in the pattern of deliveries prices made price increases for some products imperative; but the effect on peasants' incomes of these increases could not, for various reasons, be offset by corresponding cuts in the prices of other commodities.

In drawing up the financial plans for the household and socialist sectors, provision has usually been made for incorporating various reserves serving to counterbalance the possible appearance of inflationary pressures. One method of providing for such reserves has been consistently to plan for a budget surplus larger than called for by the fixed investment targets as well as the level of inventory accumulation needed for efficient distribution. Another method has been conservatively to forecast the size of the money savings of the population. By postulating a low, or zero, increase in household savings the central planning authorities have tried to discount to some extent the effect of a possibly larger increase in the money income of the population than planned. Finally, in at least one country (Poland) the practice has been to provide for a wage-fund increase larger than is implied by the plan for the growth of employment and the average wage. This furnishes a reserve against eventual over-fulfilment of the plan for average wages, or employment, or both.

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[25] The size of such reserves is evidently determined by the require- nents of the banking system which in turn, except for the flow of ersonal savings and credits to consumers, are determined on the ne hand by the principles of public financing of investment (budget- ry grants versus credits), and on the other hand by the principles f allocation of the net income of the enterprise sector to the budget. or a more detailed discussion on this problem, see M. Kucharski, *inanse*, No. 6, 1956; and *Wiadomosci narodowego banku polskiego*, Io. 12, 1960.

10.4 Problems of Maintaining Structural Balance between Income and Consumption

To secure balance between demand and supply, it not enough — as was observed earlier — for the total alue of goods and services supplied to the population at given prices to equal effective demand. Global balance also requires the achievement of equilibrium on the markets for specific categories of goods and services.

In the absence of such correspondence, the value of the total amount of goods and services offered may equal the value of effective demand, yet the actual quantities purchased by the population may be less, so that an accumulation of unspent balances, on the one hand, and of unsaleable inventories, on the other, results.

The achievement of market balance is closely related to the problem of constructing an internally consistent plan for production and consumption — consistency not only in the technical sense of setting practicable production and import targets, but also in the sense that the quantities supplied at given prices actually clear the market. For the latter purpose, it is obvious that consumers' preferences cannot be neglected in the process of plan formulation.

Knowledge of supply and demand conditions is at best imperfect, however, and the more distant the plan period, the more difficult it is to take all relevant factors into consideration. There is also the problem of assuring swift adaptation of the annual or 'operational' plan to unforeseen situations as they arise. In what follows a summary is given of the problems experienced in adapting supplies and prices to demand conditions.

(a) The co-ordination of supply and demand on particular markets

The planning of consumption is, as was stressed earlier, an integral part of overall economic planning which cannot, therefore, be described as a separate exercise. However, in order to illustrate certain key problems that it has to resolve, it may be assumed that the planning authorities confront estimates of the structure of consumption, at given levels of personal income and of prices, with estimates of the structure of supplies. Imbalances in particular markets can then be corrected primarily by means of changes in prices and supplies. The less the planning authorities are prepared to rely on short-term *ex-post* adjustments, the more important such *ex-ante* adjustments have to be. The process of adjustment becomes easier if both sets of variables, i.e. supplies and prices, can be modified. A feature of the traditional system of planning, however, was the relatively scant use made of prices as a tool for equilibrating supply and demand, action by the planning authorities being limited, for the most part, to adjustments on the supply side.

Consumption plans were often drawn up in base-period prices without adequate consideration of whether the planned supplies at these prices would correspond to demand. Imbalances could, therefore, appear at the stage of plan construction and the balancing exercise just referred to did not necessarily succeed in eliminating them. *Ex-post* measures of adjustment, on the other hand, have had to be devised in the knowledge that prices, with certain exceptions, tend to be fixed over long periods. Such changes in prices as did occur usually took the form of discontinuous "jumps" reflecting administrative *ex-post* adjustments to disequilibria which had developed earlier.

Besides the ideological reasons for the decision of the authorities in the centrally planned economies not to adopt a policy of flexible prices, some price rigidity is to be expected in any system where most prices are centrally determined. This is so, *inter alia*, because of the great administrative burden and cost that any change involves. And with price lists running to thousands of items, the authorities are naturally inclined to concentrate on those prices where the need for revision is most urgent, while neglecting the less important cases. Considerations of cost may also explain the reluctance of the authorities to test the market by a series of price adjustments, even in those cases where there was no apparent reason for maintaining admittedly faulty price relationships; yet, to some extent, the rigidity of the price structure has also been due to the planners' lack of precise knowledge of the effect of price changes on the pattern of demand. Another source of price rigidity has been the desire to avoid price increases, even if they were compensated by price reductions; for some products make up a larger share of consumers' purchases than others, and planners cannot ignore the distributional effect on lower income groups of a relative increase in prices of the former category. Such social considerations have limited the freedom of the planners to experiment with changes in relative prices.

It would, of course, be an over-simplification to trace the sources of imbalance only to the type of factors just mentioned. Planners may be prevented from reducing prices of goods in plentiful supply owing to the impossibility of raising the supply of others. In some cases, the existing profit margin may be too low to permit a price reduction that would not result in marketing below cost.

The problems faced by the planning authorities in the centrally planned economies in making adjustments on the supply side, especially those stemming from the weak influence of demand on production decisions, have been treated periodically in the *Economic Survey of Europe* and other secretariat publications.[26] Put briefly, a basic weakness of the old model of planning and management was reliance for securing implementation of plan targets on "success indicators" which, by their very nature, could not create adequate responsiveness, on the part of producing and trading units, to changing demand conditions. Moreover, the whole institutional framework of the economy did not provide for direct ties between producers and those trading units which are closest to the consumer.

On one side there was the producing enterprise, bound by central decisions on the allocation of raw materials and other inputs, for which quick responsiveness to changing demand was difficult and could often mean the underfulfilment of plan targets upon which the bonus and premia payments rested. Then there was the wholesale organization, remote from the customer as well as from the producer, whose plan was usually expressed in terms of gross turnover values and whose rewards depended little on its responsiveness to market needs. At the other d, the retail organization was generally well placed to ppraise market requirements, but was not in a position stimulate increased deliveries of the required assortent. In these circumstances, imbalances in particular arkets were often reflected in changes in stocks.

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[26] See particularly *Economic Survey of Europe in 1962*, Part 1 pp. 30 ff; *Economic Planning in Europe (Economic Survey of Europe in 1962*, Part 2*)*, Chapter VI, pp. 44 ff; and *Economic Survey of Europe in 1958*, Chapter IV.

Using stock signals and other information, the planning thorities attempted, in formulating annual plans, to cate and assess existing imbalances and to expand tput of those commodities most in demand. On the hole, their action was more successful in respect of oad commodity groups than of individual products. oreover, imbalances in particular commodity groups ruling prices, such as shortages of meat, dairy products, opical items, some textile goods and various consumers' rable goods, were in a way the result of objectively ven conditions — scarcity of material resources, of reign exchange, etc. It would also seem, however, that planning the composition of production (and investent) insufficient attention was often given to the patterns demand changes that accompanied rising income. or, although shifts in demand caused by the growth of nsumers' incomes have been sweeping, there has been pronounced tendency for the supply pattern to lag hind. As a result, the point of over-production was ached in some lines of production, while cumulative ortages were developing in others.

In practice, shortages have most often been alleviated setting the production targets of the long-term plans. frequent result has been that improvements in certain eas have depended on the completion of investment rojects yielding a steep increase in supply. Given the ng-standing backlog in demand for a number of such ommodities as television sets, refrigerators or motorycles, the sudden appearance of plentiful supplies tended distort the established buying patterns, shifting emand from other commodities and creating "demand valanches" for these goods.[27] Indeed, improvements in me markets frequently engendered disequilibria in hers.[28] Demand for certain consumers' goods went rough alternating high and low phases, sometimes eclining absolutely. Such instability of demand, in rn, made it difficult to plan supply.

It is partly in consequence of the difficulties described at far-reaching measures have been undertaken in cent years in most countries of the area with the aim introducing greater flexibility into the planning and anagement system.[29] Foremost among these are meares intended to develop closer links between industry d trade and to accord retail trading organizations eater control over the composition of deliveries. The stem of raw material supplies is being decentralized, e number of centrally fixed production targets greatly reduced, and enterprises granted more freedom in determining their product mix. Other "success indicators" have been either discarded or demoted, as profits and the rate of profitability assume the role of a major index of enterprise performance. Reforms of the level and structure of wholesale prices have been designed to create a more flexible system which should provide enterprises with greater incentives to produce and sell goods in short supply, and to stimulate the development of new products. Greater price flexibility is also envisaged at the retail level, although the scope of the contemplated changes in pricing policy varies significantly from one country to another.[30]

In the past few years, the tendency almost everywhere has been to multiply measures designed to bring prices closer to market requirements. Thus, increases in the prices of meat, and in some cases of dairy products, have been introduced in order to relieve pressure on the retail market as well as to strengthen material incentives on the farms. There have also been decreases in the retail prices of some foodstuffs, and adjustments in both directions in the sphere of consumers' durables.[31] Upward adjustments have been made in the prices of services and, in two countries (Czechoslovakia and Poland), of rents. Moreover, trade enterprises have been given greater freedom to make sales at reduced prices, including the introduction of general clearance sales.

In some countries provisionally high prices have been introduced for new products, the "normal" price becoming operative only after supply has reached a certain level. Besides helping to forestall market disturbance, this measure has the advantage of increasing incentives at the enterprise level and of yielding funds to cover part of the development cost of new products (producing enterprises usually being permitted to retain the price differential). In most countries, also, the need is appreciated for widening the list of commodities whose prices are allowed seasonal fluctuations; in the past, the list included only such articles as eggs and fresh fruits and vegetables, but now the inclusion of meat and a variety of other products is also proposed.

The greater attention paid to the elimination of market disproportions has been expressed in the creation of a new accounting and planning framework — "the balance of supply and demand of commodities". This balance, so far elaborated, it seems, only in the Soviet Union, represents an attempt to integrate the "balance of money income and expenditure of the population" (described at the beginning of this chapter) with projected balances for particular commodities or groups of commodities — thus providing a means for creating equilibrium conditions on particular markets.[32]

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[27] A contributing factor was also the relatively narrow range of come differentiation discussed in Chapter 9.

[28] Increases in imports have sometimes had the same effect shifting demand away from domestically produced equivalent ods, the appearance or quality of which could not match that imports.

[29] These measures have been regularly reported in the annual URVEYS. For a description of the extensive reforms adopted in 65, see the SURVEY for 1965, Part 1, Chapter I, pp. 56 ff.

[30] It is generally held, however, that fixed prices ought to be maintained for basic commodities, such as bread, meat, etc.

[31] The most sweeping reform of this type took place in Hungary in 1966. Important changes in the level of certain farm prices took place in the Soviet Union and Bulgaria in 1962 and in Poland in 1959 and 1965. Changes in prices of industrial goods were generally of less consequence. For more detail, see the annual *Economic Survey of Europe.*

[32] An example of this account, with figures relating to the Ukrainian SSR in 1963, is given by Korzhenevski, *Osnovnye zakonomer-*

The related problem of efficiently determining the consumption plan is also attracting more interest. The authorities in the centrally planned economies have extensive powers of influencing the assortment and prices of the goods sold to the population. They recognize, however, that not every feasible structure of supplies is equally efficient from the point of view of resource availability and requirements; and it has been argued that planners should use the price structure as a signalling mechanism for deciding the volume of the various goods that has to be offered. As one Soviet writer has put it "as a basis for regulation of demand and supply such a price level must be taken which would assure the optimal relationship between production and consumption".[33] This would mean that, while prices may deviate from costs for short-run considerations, excessive differentiation of profitability ought to serve as an indication that shifts are needed in the long run to secure a more favourable composition of supplies.

There are, of course, many reasons why responsiveness to such signals may be hampered in practice. According to an example given by one writer,[34] the application of the above broad principles to the Polish textiles industry would have required a fifty per cent increase in production; and for such an increase neither investment resources nor import capacity for raw materials are available. Without going into the problems of investment allocation, it should be noted that, in determining the investment structure in the past, planners were insufficiently sensitive to profitability even in cases where issues of growth strategy were not involved. Moreover, excessive differentiation of profitability rates, even within particular commodity groups,[35] has often resulted from other factors. In the first place, the basic elements of the existing retail price structure were established in the period of abolition of rationing — in most cases, shortly after the war. Prices of articles introduced afterwards were as a rule set in proportion to those of similar goods already in production. Evidently, in these conditions, retail prices were only loosely related to costs, especially since changes in production costs were more substantial and more varied than changes in prices.

It is in the setting of such considerations that the reforms recently undertaken in Czechoslovakia and Hungary include as a goal the achievement of a retail price structure reflecting scarcities as well as cost relatives. This means that, in the long run, supplies should be so adjusted as to by-pass altogether the need for using price policy as a means of shaping the pattern of consumption. Since the present system obviously favours families in low income brackets, it has been suggested that social assistance be provided in other forms, and that these should allow a firm estimate to be obtained of the "cost" to society of the given welfare programme.[36]

(b) The use of demand analysis in planning

Knowledge of the relationships between the level of income, relative prices, and demand is required in both short-term and long-term planning. In annual planning knowledge of demand functions can be used for projecting changes in the level of demand for various commodities and services, in the light of which supply and/or price measures can be undertaken to counter foreseeable shortages and surpluses. The need for information on demand patterns is, however, greater in the formulation of plans for longer periods. Such information can be used in two ways. One is to derive an estimate of requirements assuming a given increase of incomes, income distribution, changes in the demographic and social structure of the population, etc. The other use is in the confrontation of these requirements with production possibilities, investment and import requirements, substitution possibilities etc., and the elaboration of the actual supply (and price) plan.

With the more active quest for planning efficiency and market stability that has characterized recent years forecasting the development of consumers' demand and possible consumer reactions to changes in supply conditions has naturally gained in interest. True, the usefulness of demand analysis for planning purposes was already generally accepted in the mid-1950s, when extensive research work was begun in a number of countries. These early demand investigations had little practical application, however, as their statistical basis was unreliable and the studies themselves were not comprehensive and detailed enough to be helpful in planning. Basic data and methodology have improved in more recent years, and the scope for practical application in planning has consequently been enlarged. To give some examples of current planning uses of these new methods, in Poland continuous calculations of demand functions are now made in a specialized section of the Ministry of Trade their purpose is to determine income and price elasticities for twenty groups of commodities (of which nine are for foodstuffs and eleven for manufactured products) and to establish annual and quarterly forecasts for these commodities. It is reported that forecasts for some commodities were also made during the formulation of the 1970 Plan.[37] In Czechoslovakia, a method of project-

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nosti razvitia sprosa v SSSR, Moscow 1965, p. 195. The account shows, on one side, the projected value of sales and expected losses and mark-downs during the year, and the planned inventory requirements at the end of the year. On the other side, it shows the total value of supplies (production and imports) expected to be delivered during the year and the value of inventories at the beginning of the year. The balancing item represents the surplus or deficit of the given commodity or group of commodities. According to the data given, the total value of goods available for sale has exceeded the value of effective demand in the Republic by 486 million roubles. There was a deficit, however, in knitted goods and furniture amounting to 87 million.

[33] Korzhenevski, *op. cit.*, p. 197.

[34] See J. Struminski, "Polityka cen", in *Polityka gospodarcza Polski Ludowej*, Warsaw 1965, Vol. III, p. 167.

[35] Such as those between fabrics of different material content, between substitutes such as beer and spirits, between appliances of various specifications, etc.

[36] See for instance P. Vlach, *Planované hospodářství*, No. 6, 1966 The reform decreed in Hungary in 1966, while bringing prices much closer to production cost, did not result in any appreciable shifts in the distribution of real income. The change in the price ratios is thought to affect in equal degree households in lower and in upper income groups.

[37] See Z. Bartel, *Ekonometryczne prognozy popytu konsumpoyjnego w Polsce*, Warsaw 1964.

ng demand by broad commodity groups resulting from esearch undertaken at the Trade Research Institute is ow used in medium-term planning. In eastern Germany nd Hungary, demand analysis is widely applied in the rojection of requirements for a number of commodities, omprising some groups of industrial goods as well as oodstuffs.[38]

A common feature of the approach followed in the ountries just mentioned (as well as in the Soviet Union) n demand forecasting over short time periods is the ssumption of a relatively simple dependence postulating verage per capita income as the major, and sometimes he only, explanatory variable. In some countries, though for example, Czechoslovakia), average elasticity coefficients are calculated separately for each socio-economic roup (workers, employees and peasants), total demand eing then calculated as the sum of the demand of each roup. Also, expected changes in the demographic tructure of the population are often taken into conideration by correcting the original estimates.

The failure of this approach adequately to take into ccount shifts in the size distribution of consumers' ncomes has been considered its basic weakness. A iven change in average income can occur in different vays, each of which may affect demand differently, and ence a more disaggregated method of analysis has been onsidered useful.[39] In order to overcome this weakness, he Soviet Institute for Research in Labour and Wages ndertook the construction of a "model" of expenditure f family incomes differentiated by size of per capita ncome, as well as by the demographic characteristics f the family. In this model, the level of consumption f various goods and services (expressed both in value nd physical units) varies with the type of family (classiied by size and composition) and the size of family ncome. Integration of this "model" with the "model f formation of per capita family incomes", and the 'balance of income and expenditure of the population",[40] as yielded what is termed the "differentiated balance f income and expenditure of the population" (described n Appendix 10.I). This latter balance is essentially a cheme for projecting consumption on the basis of nown relationships between, on the one hand, income nd expenditure at the family level, and relationships overning the distribution of family incomes (given the tructure of wages and other factors affecting this distriution), on the other.

The quality of the data

In investigating demand patterns, planners in the countries under study usually dispose of three types of information : time series on total consumption, retail sales, and prices; cross-section data on household consumption expenditures; and time series referring to the same households.[41]

The information provided by time series is of considerable value for demand analysis. Demand functions obtained from time series can take into account the "trend" factor or such systematic changes as cannot be attributed to any single explanatory variable. Time series also provide the basic materials for estimating price and cross elasticities which cannot be derived from cross-section data. The use of such series, however, runs into a number of problems created by the nature of the available data and the character of the past development of the centrally planned economies. For example, owing to the persistent shortages of some commodities, demand functions based on these data can be seriously distorted — not only for the scarce commodity, but also for those where no supply difficulties existed. Thus, a significant improvement in the supply of, say, consumers' durables was bound to affect both the income elasticity of demand for that group and that for basic items of clothing which were in adequate supply.[42] Another defect of time-series data is that they are generally prepared on an annual basis. This makes the available time series very short, in most cases, with the result that estimated demand functions have to rely on a small number of explanatory variables, and the standard errors of estimates of their parameters are frequently large.

The effect of shortages is attenuated in cross-section data, since they refer to the same period, when scarcities can be assumed to have roughly the same effect on all the households observed. The value figures derived from family budgets are also less distorted by scarcities, since households with more ample financial resources are better placed to avoid such scarcities by paying more per unit of product (e.g. they would buy meat on the free market or, in state shops, higher priced processed or preserved meat). More importantly, budget data allow changes in the pattern of distribution of family incomes and in the demographic and socio-economic structure of the population to be taken into account, since elasticity coefficients can be calculated for individual groups of households. This is particularly relevant when planners need to know to what extent an income measure affecting a specific population group will influence the market situation.

The use of time series for regularly reporting households is designed to provide information referring not only to various types of households but also to different prices and different time periods. This should make possible the estimation of detailed price elasticities as well as allowance for trend factors. As with aggregate time series, however, the available household budget data cover too short a period in most countries to contribute sufficient information for that purpose.[43] Nor has the problem of assuring representative coverage of the various sections of the population found a satisfactory solution. Finally, for certain groups of commodities — in particular those that are not recurrently purchased — the information obtained from family budget data is not conclusive.

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[38] In preparing the east German 1970 Plan, demand functions were elaborated for various types of food, clothing and household goods.

[39] A proposal to solve this problem in terms of aggregative analysis was put forward by Z. Pawlowski in *Przeglad Statystyczny*, No. 4, 1960. It consisted of using as explanatory variables of the lemand function not the average income but the values of the arameters of the density function of incomes.

[40] Representing the "balance of money income and expenditure of the population", adjusted for consumption in kind.

[41] Use is also made of other information obtained from public inquiries, suggestion blanks, exhibitions, fashion shows, etc., but this type of information is still scarce.

[42] This problem has been given considerable attention in theoretical studies concerning the statistical estimation of demand functions. A solution was proposed by Z. Pawlowski in *Przeglad Statystyczny*, No. 1, 1960; see also M. Kolupa, *ibid.*, No. 4, 1960.

A problem concerning the character of the available data which is common to all countries is that, since price changes have occurred infrequently and only at long intervals, the available information on price elasticities is not sufficient to allow the effect of price changes on demand to be calculated precisely. Still less information is available on cross-elasticity effects.

Estimated demand elasticities

As for the elasticity calculations themselves, differences in coverage of the series, in the length of the period underlying the calculations, as well as in mathematical formulas applied in each case, preclude any thoroughgoing comparative analysis. Still, study of the available material permits a few generalizations — one such being that consumption of *foodstuffs* not only still weighs heavily in total consumption expenditure in most countries, but that per capita food consumption tends to increase relatively steeply as incomes rise. The calculated income elasticity coefficients for foodstuffs, as a group, have in most cases values of between 0.6 and 0.8, thus indicating that for each planned 10 per cent increase in incomes the supply of foodstuffs must increase by 6-8 per cent. Among major commodities in this group, the income elasticity of meat consumption varies between 0.7 and 0.9 — a notable value, since the levels of meat consumption already reached are fairly high in relation both to standard physiological needs, and to consumption levels in western countries. There is also a strong connexion between the growth of income and the consumption of such items as butter and other milk products, eggs, fruit and vegetables. Per capita consumption of fruit and vegetables is still relatively low in most centrally planned economies, reflecting the slow expansion of, and wide fluctuations in, output from year to year. Among foodstuffs, the highest elasticities are found for beverages, tobacco products, and public catering — the coefficient for which is well above unity.

Consumption of a number of important items in the foodstuffs group has reached near-saturation levels and consequently tends to increase relatively little with a rise in income. Flour and bakery products are cases in point — most of the increase in consumption reflecting shifts in assortment towards more refined products (such as white bread, pastry, etc.). Potatoes, milk and sugar are also in this category, the coefficient for milk ranging between 0.2 and 0.5, and that for sugar between 0.3 and 0.6, in most countries.

The coefficients of income elasticity for *industria commodities*, taken as a group, vary more widely than those for foodstuffs. Nonetheless, in all cases they are considerably above unity, usually in the 1.3-1.9 range. Owing, however, to differences in sub-classification and in the composition of commodities, it is even more difficult to generalize about the behaviour of particular groups.

The coefficients of income elasticity of expenditure on clothing show particularly large differences when obtained from time series and family-budget data, the former being as a rule much lower than the latter. This is because, for most of the period to which time series refer, the composition of supply of this group has tended to diverge from market needs and consumers were therefore more attracted to other goods. When methods of estimation are comparable, there also appears to be a relatively greater variation in the coefficients calculated for this group as between various countries — probably reflecting to a large extent differences in the composition of what appears, at first sight, to be a fairly homogeneous group of commodities. The explanation is that, although changes took place everywhere in the composition of this group, the rate of change was not the same. Still, the main tendencies for this group are quite similar. Stimulated by the appearance of new fibre materials of better quality and greater variety, particularly in women's clothing, demand for a large segment of this commodity group has been rising very fast. At the same time, however, demand for materials and clothing of ordinary quality and design has tended to slacken, thereby depressing the coefficient for the group as a whole.

In all countries for which comparable data are available, the income elasticity coefficients are very high for all sorts of consumers' durables, motor-vehicles and sports goods. The coefficients for books, newspapers and similar cultural goods are also fairly high. For shoes, the income elasticity is between 0.8 and 1.0 — a value which, although lower than for all other major industrial commodities, is fairly high in relation to present income levels in the countries under study.

Mainly on account of supply limitations, the income elasticity of demand for services has generally a value of 1.2-1.6. For rent, expenditure on which is particularly affected by supply limitations, the coefficients vary between 0.3 and 0.8, whereas the elasticity for house-building and repairs is very high. As can be seen from the roughly comparable figures for Czechoslovakia and Hungary presented below, personal services[44] are also in highly elastic demand.

Elasticities of demand vary significantly between households belonging to different socio-economic groups. This reflects differences in per capita income and, more importantly, in tastes and habits. Thus, as can be seen from Hungarian data (Appendix Table 10.II), even at a similar per capita income level, considerable differences are found between peasants and wage-earners as regards the income elasticity of expenditure on "housing, heating and lighting", "health, cosmetics and hygiene", "culture

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[43] Except in the Soviet Union, where household budget statistics are available from as far back as the 1920s.

[44] Including domestic services, hairdressing, etc.

Average income elasticity coefficients[a]

	Czechoslovakia	*Hungary*
Rent	0.8	0.8
Transport and communications	1.3	1.3
Recreation	1.4	..
Repairs and other work on order	1.8	1.6
Health, education and culture	..	1.1
Personal services	1.5	1.7

[a] Based on household budget data.

nd education", "transport", and "other personal xpenditure". All of these are significantly higher for vage-earners than for peasants, but for "consumers' lurables and household goods", "building and purchase of real estate", the opposite is true. Similar differences are indicated in most cases by the Czechoslovak nd east German data (Appendix Tables 10.III and 0.IV), although here the comparison is blurred because he influence of the income factor is not eliminated.

Similarly, the size of the household has a significant mpact on elasticities, even for broad classes of expenliture. An analysis carried out in Poland for workers' ouseholds in 1960 gave the following results:

Income elasticities of demand for food and clothing

Per capita combined incomes (zlotys per year)	*Childless couples*	*Family size (number of children)*			
		1	*2*	*3*	*4*
	(a) *Food*				
Less than 5 000	—	—	0.51	0.60	0.72
5 000-10 000	0.44	0.61	0.67	0.75	0.83
0 000-15 000	0.54	0.70	0.75	0.82	0.88
5 000-20 000	0.61	0.76	0.80	—	—
20 000-25 000	0.66	0.80	—	—	—
	(b) *Clothing and footwear*				
Less than 5 000	—	—	3.01	1.69	2.09
5 000-10 000	1.98	1.74	1.50	1.26	1.35
0 000-15 000	1.49	1.40	1.29	1.16	1.21
5 000-20 000	1.33	1.27	1.20	—	—
20 000-25 000	1.25	1.20	—	—	—

Source: Gospodarka Planowa, No. 11, 1964, p. 57.

Income elasticities by income groups show significant lifferences which are bound to influence demand depending on the distribution of income increases by income groups (see Appendix Table 10.V). Thus, a proportionately larger increase in incomes in the lowest categories would result in more additional expenditure on food and clothing than an increase concentrated on the highest ategories, which would most affect demand for high-quality durables (particularly motor-vehicles), dwelling onstruction, and expensive services (particularly travel nd holidays). It would seem that demand elasticities for xpensive foodstuffs — particularly off-season fruits and vegetables, and expensive meat products — and beverages re also high in the high income brackets. Finally, it is point of general importance that the elasticity of non-consumption items (i.e. savings, financial expenditures, etc.) is much higher in the very high income groups than elsewhere, though part of this difference is explained by specific scarcities (particularly motor-cars).

The relationships described above indicate that, for long-range consumption planning, a disaggregative approach that takes into consideration relationships between income and expenditure in the various types of households (as is done in the Soviet Union) may well yield better results than those obtained by other means. It is, nonetheless, clear that statistical methods suffer from fundamental limitations. The higher the level of development — the more complex consumers' wants, and the greater the possibilities of substitution — the more difficult it becomes to anticipate consumers' action many years ahead.

Any exercise in projection involves well-known hazards, and should be regarded only as a rough approximation identifying a certain possible value around which actual values may concentrate. This implies the need for introducing constant corrections, and in effect projection becomes a continuous process. But even errors committed in this process are of some value as, by studying their source, additional knowledge can be obtained concerning the variables determining changes in the pattern of consumers' demand.

The pattern of demand is the product of multiple and complex factors, among which the level of income and the structure of prices are only two. In the conditions of a centrally planned economy both can be projected relatively easily; there are others, however, which do not lend themselves to such treatment. Thus, it is virtually impossible to anticipate the nature of changes in tradition, fashion and taste, and hence the effect which such changes may have on the pattern of demand. It is also difficult to foresee the appearance of new products and the impact which they may have on consumers' buying habits; and planners are not well placed to project changes in the technology of production and their effect on cost and price ratios. For these reasons, detailed projections are possible only for relatively short time periods during which the cumulative impact of the enumerated factors may not be very strong. The longer the period covered by the plan, the more aggregative is the projection bound to become.

In spite of the weaknesses of the available data, the parameters available to planners are undoubtedly sufficient to bring out basic regularities — knowledge of which is of great practical importance. However, it is one thing to determine the level of demand for such goods as meat or sugar and quite another to estimate with a fair degree of accuracy the demand for such items as television sets or washing machines — goods which are purchased only once in many years. When it is necessary to formulate detailed plans, even to estimate requirements of such basic clothing items as coats or shirts, the great variety of sizes, styles and colour compounds the difficulties of projection.

Difficulties in estimating the demand for industrial goods are in some respects aggravated in the centrally planned economies by the existing relatively low degree of dispersion of consumers' incomes. In conditions where the dispersion of incomes is relatively small, changes in consumers' preferences — whether brought about by changes in income and prices or by environmental and psychological factors — are bound to have a more profound influence on the demand pattern than would otherwise be the case. Thus, for instance, even a modest increase in the populations' income may put certain goods within the range of accessibility of a relatively large number of households.[45] This factor accounts in part for the fact that demand for certain items has not risen in the past with any predictable regularity, but instead has taken the form of sudden bursts or "demand avalanches".

While there are various shortcomings in the structure of foodstuffs supply, the demand elasticity of many items in this group has reached — as was indicated above — a low level, which suggests that the growth of requirements will be less buoyant in years to come. A similar situation exists in the group of clothing and apparel, as well as in that of industrial durables, but consumption of consumers' durables is still at a rather modest level in most of the centrally planned economies. This reflects prevailing income levels and relatively high prices; it reflects also, however, supply shortages for such items as furniture, heavy domestic appliances and automobiles. Consumption of services is also low. As a result of recent measures, supplies in these groups will probably improve rapidly (although any sudden expansion in supply of, say, automobiles may — as in the past — create difficulties in other fields by disturbing established buying patterns).

All the factors reviewed point to the need for sensitivity on the part of planners and producers alike to a constantly changing market situation. Even the most refined methods of forecasting cannot supply the firm information on the nature of the effect of the various factors on demand that is needed for detailed planning of production. Whether the problem of dynamic equilibrium between income and consumption will find a more adequate solution will thus largely depend on the creation of a flexible system, such as is aimed at by the reforms currently being undertaken in the field of planning and management.

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[45] A proportion of these being willing to forgo or to reduce the purchase of items previously entering the household budget.

Appendix 10.I

As stated in the main text, in order to link together the separate models of incomes and consumption and to improve the basis for ncome and consumption policy decisions, Soviet planners have begun to elaborate what is termed a "differentiated (disaggregated) balance of incomes and consumption of the population".[1] The cheme consists of three basic parts; one characterizes the age, sex and activity structure of the households, the second the level and composition of family income, and the third the level and structure of consumption. Each of these parts comprises a number of tables.

The key to the construction of the "balance" is the distribution of households according to the size of their per capita income. A basic breakdown shows the absolute number of households, together with the number of their members, in each per capita income class.[2] Households are then sub-divided, according to demographic characteristics, into a number of sub-groups.[3]

The first part of the "balance" provides a breakdown of family members by age[4] and sex groups, and shows the number of income ecipients together with a breakdown by type of major income eceived.[5] The second part shows total family income broken down by various types of income.[6] The third part shows total expenditure broken down by major categories,[7] with the possibility of further differentiation at the level of specific commodities.

These breakdowns make possible the derivation of coefficients which can be utilized for the construction of a "balance" for the plan period. The authors distinguish "quantitative" and "qualitative" coefficients. The former cover the parameters characterizing (*a*) the size of the per capita income and (*b*) the family composition. The latter cover the parameters describing the structure of incomes and expenditure of families of a given income and composition.

Since most of the structural characteristics of the balance are relatively stable, the effect of, for example, changes in wages of specific groups of wage-earners, changes in family allowances, changes in taxation, etc. can be analysed and their effect on the living standards of various family types evaluated. The balance also provides a tool for following up the structural changes in demand which may occur on account of demographic changes or changes in the incomes of various family types. According to some authors it may also be used for arriving at a rough evaluation of the level of unsatisfied demand for some commodities.[8]

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[1] The "balance" is elaborated under the auspices of the Labour Institute in Moscow and the Economic Institute of the Academy of Sciences of the Armenian SSR. It was first proposed by I. Pisarev n his work *Metodologicheskie voprosy isuchenyia urovnya zhizni trudyakhshchikhsya.* The first attempt to elaborate a methodological scheme was made by A. Karapetian in *Primenenie matematiki i elektronnoi tekhniki v planirovanyu.*

[2] Five per capita income categories are distinguished (in terms of monthly income in roubles): up to 35, 35-50, 50-75, 75-100 and over 100.

[3] The following sub-groups are used: single men, single women, households 50 per cent of which consist of children under the age of 16, couples with one child and one additional grown-up member, childless couples, and all other households.

[4] The following age groups are distinguished: adults, children under one year; children from one to three years; children from three to six years; children from six to sixteen years.

[5] Thus, a distinction is made between wage-earners, pensioners, stipendists, etc.

[6] The table relating to this part of the balance is constructed as follows:

Groups of families according to the level of per capita income	Total incomes	Money incomes					Benefits in kind
		Wages and salaries		Incomes from social funds			
		Total	*of which:* Wage or salary of the first wage-earner	Pensions	Stipends	Benefits	

[7] The table relating to this part of the balance is constructed as follows:

Groups of families according to the level of per capita income	Total expenditure	Expenditure on material goods			Expenditure on services	Family savings
		Foodstuffs	Consumer goods (non-durable)	Durable consumer goods		

[8] By comparing the structure of expenditure of identical family types in regions and cities with differing supply conditions.

APPENDIX TABLE 10.I

The volume and growth of savings deposits in relation to retail trade

Percentages

Country and indicator	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Bulgaria											
(A)	15.2	17.7	20.4	23.9	26.4	31.1	33.2	34.4	36.7	39.1	41.6
(B)	1.8	3.4	4.3	5.3	6.5	7.2	4.9	3.5	6.0	4.4	5.2
Czechoslovakia											
(A)	8.2	10.8	13.8	17.0	19.7	20.9	23.1	24.9	26.9	29.7	32.2
(B)	2.2	3.1	3.6	3.3	3.2	2.4	3.0	2.6	2.5	3.5	4.0
Eastern Germany											
(A)	15.6	18.6	25.7	29.5	33.3	37.9	41.3	44.4	48.6	54.3	59.3
(B)	3.9	3.5	8.3	6.0	6.6	6.8	5.5	2.8	4.3	7.2	7.2
Hungary											
(A)	1.6	1.2	2.5	4.2	6.4	8.2	9.6	12.1	15.6	19.9	22.9
(B)	0.3	−0.3	1.4	1.8	2.6	2.4	1.6	3.1	4.4	5.3	3.7
Poland											
(A)	1.8	2.3	3.9	4.8	6.4	8.3	8.9	11.0	13.7	15.9	17.7
(B)	0.6	0.8	2.0	1.2	2.1	2.1	1.3	2.6	3.4	2.9	3.1
Soviet Union											
(A)	10.7	11.6	12.9	12.9	14.0	13.9	14.4	14.6	13.2	16.3	17.9
(B)	1.1	1.8	2.7	1.0	1.9	1.1	0.9	1.2	1.4	1.8	2.9

Key: (A) Ratio of savings deposits to retail trade.
(B) Ratio of increment in savings deposits to retail trade.

Source: National statistics.

APPENDIX TABLE 10.II

Income elasticities of expenditure of wage-earners and peasants by income groups, Hungary 1962

Expenditure item	Wage-earners					Peasants				
	Average	Forints per capita				Average	Forints per capita			
		400-600	800-1000	1200-1400	1600-1800		400-600	800-1000	1200-1400	1600-1800
Food, beverages and tobacco	0.66	0.76	0.67	0.58	0.50	0.68	0.78	0.64	0.58	0.39
Rent, housing, maintenance, heating and light	0.85	0.98	0.86	0.74	0.68	0.67	0.76	0.64	0.54	0.33
Clothing	1.07	1.15	1.08	1.01	1.00	1.17	1.23	1.16	1.13	0.98
Household goods and other consumers' durables	1.79	1.65	1.82	1.87	1.90	2.08	2.08	2.11	2.02	1.75
Health, cosmetics and hygiene	1.29	1.42	1.30	1.20	1.13	0.74	0.81	0.72	0.63	0.40
Culture, education and entertainment	1.44	1.49	1.45	1.40	1.43	1.25	1.29	1.24	1.24	0.99
Transport	1.47	1.63	1.50	1.31	1.27	1.16	1.22	1.15	1.03	0.78
Other personal consumption expenditure	1.80	1.83	1.79	1.79	1.80	1.69	1.82	1.64	1.49	1.33
Building and purchase of real estate	1.54	2.02	1.44	1.29	0.91	2.60	2.57	2.61	2.76	2.43

Source: Háztartásstatisztika, 1962, Budapest 1964, p. 69.

APPENDIX TABLE 10.III

Average income elasticity coefficients of demand, by socio-economic groups, Czechoslovakia 1958

Expenditure item	Workers	Employees	Collective farm members
Meat and meat products	0.818	0.648	0.720
Milk and milk products	0.268	0.153	0.580
Eggs	0.743	0.842	0.333
Fats	0.491	0.282	0.540
Bread	0.367	0.250	0.496
Flour	0.032	0.234	0.416
Confectionery	1.139	1.063	0.818
Sugar	0.296	0.155	0.231
Potatoes	0.459	0.267	0.106
Vegetables	0.709	0.575	0.561
Fruits	0.997	0.881	0.756
Other foodstuffs	0.762	0.658	0.857
Beverages	1.281	1.114	0.927
Public catering	1.479	1.407	1.269
Clothing	1.334	1.434	0.902
Fashion articles	1.482	1.194	1.698
Footwear	0.948	0.857	0.707
Household equipment	2.235	2.021	1.174
Culture and books	1.112	1.380	0.842
Sporting equipment and vehicles	2.773	1.677	2.706
Sanitary articles	0.665	0.899	0.525
Building materials, paints and varnishes	1.032	1.028	1.671
Fuels	0.673	1.041	0.935
Tobacco	1.261	1.111	0.408
Other industrial goods	1.444	0.776	1.179
Rent and communal services	0.749	0.634	1.138
Payments for building work on private housing	1.214	1.117	1.937
Craftsman's work	1.551	1.551	1.401
Transport, communications	1.137	1.091	1.149
Personal services	1.333	1.022	1.499
Cultural services, education	1.274	1.058	0.940
Holidays and travel	1.859	1.406	1.751

Source: Bezouska, Vytlacil, Walter, *Zjistovani Spotreby a Poptavky u Obyvatelstva*, Prague 1962, p. 260.

APPENDIX TABLE 10.IV

Average elasticities of demand for manufactures, by socio-economic groups, eastern Germany 1960

Expenditure item	Wage-earners	Collective farmers	Pensioners	All categories
Footwear	1.01	0.64	0.62	0.94
Socks and stockings	0.98	0.72	1.13	0.97
Ready-made clothing	1.86	1.06	2.83	1.88
Underwear	1.20	0.83	1.55	1.20
Cloth	1.80	1.24	3.48	1.92
Household textiles	1.49	1.22	2.25	1.54
Other household goods	1.35	0.82	2.81	1.45
Furniture and fittings	7.11	1.65	3.10	6.20
TV, radio, musical instruments	6.47	2.82	..	6.10
Sports equipment	4.71	1.71	..	4.41
Vehicles	5.13	5.42	..	5.16
Books and paper	1.06	0.55	1.91	1.10
Health and hygiene	0.50	0.33	0.79	0.51
Fuel	0.35	0.52	0.46	0.38
All industrial goods	2.10	0.99	1.57	1.94

Source: Die Auswertung der Statistik der Wirtschaftsrechnungen für die Erforschung des Bedarfs nach Industriewaren und Leistungen, Leipzig, August 1964, p. 190.

APPENDIX TABLE 10.V

Coefficients of income elasticity calculated from group averages,[a] 1963

Expenditure item	Hungary			Poland		
	I	II	III	I	II	III
Meat	0.98	0.41	0.10	0.99	0.63	0.28
Animal and vegetable fats [b]	0.23	—0.08	—0.25	0.10	—0.09	—0.17
Milk	0.44	0.04	0.05	0.16	0.06	—0.09
Butter and dairy products	1.62	1.14	0.11	1.08	0.67	0.33
Eggs	0.87	0.53	0.11	0.90	0.60	0.26
Sugar	0.54	0.21	—0.05	..	..	..
Cereals and products	0.15	0.05	—0.06	0.07	0.04	—0.05
Potatoes	0.17	0.03	—0.28	0.08	—0.02	—0.24
Fruits (including canned)	1.04	0.88	0.20	1.34	1.06	0.48
Vegetables (fresh)	0.41	0.39	—0.06	0.80	0.64	0.26
Alcoholic beverages	2.02	1.29	0.54	1.98	1.60	1.27
Tobacco	0.61	0.25	1.86	1.04	1.25	0.94
Clothing (ready-made)	0.93	0.90	0.27	1.51	1.44	1.04
Shoes	0.89	0.54	0.16	0.74	0.89	0.59
Furniture and heavy appliances	4.49	1.65	1.46	..	..	..
Heating and lighting	0.76	0.59	0.47	0.91	0.78	0.42
Medicine and cosmetics	3.29	1.29	0.75	1.30	1.42	1.17
Transport and communications	2.24	1.41	1.10	2.18	1.75	1.72
Motor-cars	1.08	6.26	10.60	..	..	..

Source: Derived from data given in the *Statistical Yearbooks.*

[a] Per capita income groups are ranked left to right, from lowest to highest.

[b] Excluding bacon and butter.

CHAPTER 11

SUMMARY OF CONCLUSIONS RELATING TO EASTERN EUROPE AND THE SOVIET UNION

11.1 THE PATTERN OF ECONOMIC GROWTH DURING THE 1950-1965 PERIOD AND ITS EFFECTS ON INCOMES POLICIES

One result of the political and social transformations hich took place in eastern Europe after the last war as the adoption in all the countries of the area of olicies for accelerated economic growth. Using powerful istruments of central control, especially those determin-g the size and structure of investment, the authorities med at rapid industrialization as a pre-condition for taining their overall goals of development, including nprovements in living standards.

Although the rates of industrial growth tended to ecelerate with time, the policy of forceful industrial-zation was on the whole successful: over the entire eriod the average rates of industrial expansion (measured y the index of global output) ranged from about per cent a year in Czechoslovakia to nearly 15 per cent Rumania, with the less developed countries of the rea reaching a faster tempo of growth than their more dvanced neighbours. This rapid expansion of industry as largely responsible for the fast growth of total naterial) income, which rose by multiples ranging om 2½ times the 1950 level in Czechoslovakia and lungary to more than 4 times in Rumania.

The changing emphases of the chosen strategy of evelopment exercised a far-reaching influence on various spects of incomes policy throughout the period. In e earlier years the stress was on deep structural changes investment, employment and output. The existence of ome unused industrial capacities and, in most countries, f large reserves of urban and rural labour favoured e attainment of a very fast growth of national income. he generally high investment ratio, and a structure of xed capital formation biased towards "productive" ivestment, helped to absorb the redundant labour eserves and to shift labour from the less to the more roductive sectors. Later, the scope for further expansion f employment tended to diminish, and this was partly sponsible for increasing capital/output ratios.

In general, the decade that started around the mid-950s was marked by less regularity of development mong the countries of the area than in the earlier ears. However, in several countries — above all in lungary, Poland and Czechoslovakia — the early invest-ent phase was followed by a period of some relaxation f the investment drive, accompanied by marked gains levels of consumption. By the late 1950s, most countries ad again embarked on the policy of intensive investment - with, however, more emphasis this time on agriculture nd the non-productive sectors. In general, the 1960s itnessed a distinct shift away from the policy of maximization of output towards one of improved quality and greater rationality.

The ubiquitous successes in the extent of the industrialization drive were not fully matched by improvements in living standards. This was partly an aim of policy, as the exigencies of early industrialization required some — though temporary — sacrifices in the rate of expansion, if not in the levels, of consumption standards. But in a number of respects the priorities embodied in the general development schemes went further than intended. This was particularly reflected in the universal failure to raise agricultural output to the planned levels and in the considerably wider than expected gap in the output of producers' and consumers' goods (Group A and Group B), leading in general to below-plan supplies of consumers' goods. On the other hand, the tendency to overfulfil employment targets led to an inflation of demand, and placed obstacles in the way of attaining planned increases in average real wages per wage-earner; and since the overfulfilment of employment targets was partly due to the above-plan expansion of family labour, family incomes tended everywhere to grow faster than individual wages.

The expansion of employment opportunities had further repercussions on income formation and distribution. They made possible a cumulation of jobs by one person and, in the countryside, a merger of incomes from several sources, including non-agricultural activities; and the latter development led to the creation of a peasant-worker category of employment, which particularly benefited from the industrialization process. Furthermore, the high level of demand for skills facilitated vertical mobility of labour. Thus, the increase in the number of wage-earners in the family, cumulation of incomes, and changes in the structure of skills and employment played a major, and often greater than anticipated, role in raising per capita incomes, and by the same token tended to reduce the scope for improving the wage and salary rates. This meant also that the distribution of incomes between households was often the outcome of circumstances unrelated to policy objectives.

The evolution of employment policy, and its impact on the formation and distribution of income, were to a certain extent geared to the changes in resource allocation that characterized the period under review. Moreover, the latter also influenced other aspects of income policy, such as price policy and the emphasis attached to the ruling wage-incentive system (see Chapter 7, section 7.1).

11.2 INCOME TRENDS AND URBAN/RURAL DIFFERENTIALS

In a planned economy, the macro-economic decisions of the central authorities regarding the distribution of national income between consumption and investment are the foundation of an incomes policy. The analysis of trends over time shows the countries of the area to have gone through certain distinct stages of evolution, roughly identified as typically investment or consumption phases, and that their timing, sequence and duration have varied greatly between countries.

Another aspect of resource allocation with a strong bearing on income policy — the relative importance assigned to social consumption in relation to personal consumption — also showed a great diversity of treatment between countries and over time. On the whole, there has been a tendency for the collectively distributed part of the total consumption fund to grow more than proportionately, but in most countries the trend has not been uniform over time.

The volume of the per capita (material) consumption fund rose over the period by a margin varying from about two-thirds in Czechoslovakia to about one hundred per cent in Hungary and Poland, and probably somewhat more in Bulgaria,[1] and the available evidence — admittedly fragmentary — seems to indicate that, at least with regard to long-term developments, the dynamics of the wider aggregates of total consumption of goods and services and of the total population income were not markedly different from that of material consumption (Chapter 7, section 7.3).

The postwar transformation of socio-economic systems brought about a marked change in the composition of the income of the population according to source, by virtually eliminating income from profit and greatly reducing that from self-employment. The bulk (some 70-80 per cent) of the total income of population now derives from income from work (which includes income from all agricultural activities as well as wages and salaries), and within this category the share of income from employment (or wage income) has tended to grow with the progress of urbanization and the socialization of agriculture. At the same time, the share of income accruing from the social welfare fund, including social benefits in cash and in kind (in the form of state-provided services mainly in health and education) has also grown in importance.

The maintenance everywhere of distinct socio-economic differences between the wage-earner and the peasant, and their relevance for overall employment policy, have put the problems of the urban/rural income differential in the centre of attention of policy makers. The more numerous employment opportunities that opened up in the early stages of the industrialization drive permitted a large rural emigration and were everywhere taken advantage of by peasants seeking additional sources of income, particularly in countries with chronic underemployment in the agricultural sector. As already mentioned, this development gave rise to the establishment on a large scale of mixed peasant-worker households; and it was this rather new socio-economic category which — in addition to the permanent rural emigrants — seems to have benefited most from the immediate advantages brought by industrialization. Statistical information is particularly inconclusive with regard to the level of and trend in the urban/rural differential, but all the available evidence suggests that, at least during the 1960s, the policy of achieving a marked improvement in the material incentives for peasants has resulted in a significant narrowing of this traditionally wide gap. Given the income differences between the town and the village at the beginning of the period, the structural changes in population and employment which characterized the period under study must themselves have contributed to the increase in the total income of the population.

Over this period the level of incomes from non-agricultural employment, measured by the real wage per wage-earner,[2] rose by multiples ranging from 1.5 times in Czechoslovakia and Poland to more than twice in Bulgaria and Rumania and to as much as 3.5 times in eastern Germany. These wide inter-country variations were underlined by marked differences in the way these changes came about. There were, in the first instance, some divergencies in rates of expansion of the non-agricultural labour force. Thus, employment outside collective and private farms rose by one-fourth in eastern Germany and by about one-half in Czechoslovakia, but it more than doubled in Bulgaria and Rumania. Secondly, consumer-price policies differed widely between countries. In eastern Germany the cost-of-living index stood in 1965 at slightly more than half of its 1950 level, most of this decline having occurred in the early 1950s, and a similar trend, on a lesser scale, occurred in the Soviet Union. In most other countries prices rose steeply in the early 1950s and, after some declines following the monetary reforms of 1952-1953, either remained about stable (Hungary and Czechoslovakia) or continued to rise at a slower rate (Poland and, to a lesser extent, Rumania). On the whole, the upward movements of prices were associated with the rising cost of food and, in some countries, of services, whereas prices of industrial goods showed everywhere a declining tendency.

In eastern Germany, the Soviet Union and Bulgaria (since 1952), the policy of price cuts instituted in the early 1950s was a decisive factor influencing the rapid growth of real wages; and a change in this policy in the mid-1950s checked subsequent expansion. In all other countries, on the other hand, the most rapid growth of real wages occurred in the second quinquennium and was largely associated with improvements in nominal wages, brought about mainly by revisions of existing wage rates.

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[1] The Bulgarian series of national income data begins in 1952; no data at constant prices are available for the whole period for other countries.

[2] The term "real wage per wage-earner" is used here, as in the main text, as an abbreviation covering the aggregate of wages and salaries divided by the total number of workers and employees.

the 1960s there has been a relatively slow growth of erage real wages everywhere except Rumania, usually llowing a low rate of expansion of nominal wages d some upward movement of consumers' prices.

As urban employment tended everywhere, and for ost of the time, to expand faster than urban population, e ratio of earners per family member tended to grow, that the living standards of wage-earner families were fact increasing faster than indicated by the trends in ages per wage-earner. The contribution made by the sing economic activity ratio to the increment in family come was very uneven over time and varied from country country, depending largely on short-term changes in nployment but also on such purely demographic factors changes in family size, and age and sex composition. n the other hand, the effect of additional incomes esides remuneration for work) on trends in living andards, as measured by the index of per capita total mily income, does not show — for the few countries r which such estimates could be made — any consistent agnitude or direction. There were periods when social enefits in cash and in kind, which make up the bulk of e non-wage incomes of wage-earners, were increasing ore slowly than the wage-fund.

The postwar transformation of the institutional frame- ork of the agricultural sector in eastern European countries changed the composition of farmers' incomes and has added to the difficulty of their measurement. The dual nature of collective farmers' income — from the collective and from private plots — and the diversity of modes of marketing and of prices of agricultural products have also widened the scope of instruments available to the planners for controlling and influencing the level of peasant incomes. At the beginning of the period under study, there was a general tendency in eastern European countries to hold back the expansion of peasants' incomes from agricultural activities, mainly by means of compulsory delivery quotas, low procurement prices and taxation. In most countries, the early years saw the heaviest outflow of the agricultural population to the towns as well as an increased incidence of non-agricultural employment among those remaining in the countryside. Later, when both the feasibility and advisability of further massive emigration movements were reduced, and the slow advance in agricultural output called for improved incentives, a policy of easing restraints on peasant incomes from agriculture was introduced everywhere. It took as its main forms the reduction or removal of compulsory delivery quotas and a marked improvement in procurement prices. At the same time, efforts were made to improve the general living conditions of peasants by such measures as extending the coverage of social security schemes to the farm population.

11.3 PLANNING OF INCOME FROM EMPLOYMENT

As already noted, the objectives of income policy in e centrally planned economies are closely interwoven ith the strategy of economic policy in general. This is articularly true of that part of the final income of the opulation which derives from employment. The inter- lations between this category of incomes and the exigen- es of economic growth are direct and unambiguous.

Thus, the purpose of wage policy can be reduced to ree headings. First, its task is to stimulate the individual roductivity of producers whilst observing some recog- zed criteria of a just reward such as the input of socially necessary labour". Second, the pattern of income fferentiation must be such as to encourage horizontal d vertical labour mobility in the priority directions tablished in the long-term plans. Third, the system ust provide a built-in mechanism of control over the lation between labour productivity and average wages hich would permit achievement of the desired resource location and income distribution without disturbing e overall equilibrium of the economy.

The basic feature of wage planning in the centrally anned economies is its reliance on a comprehensive ation-wide wage system, which provides a standing amework for the execution of long-range policies. he system largely reflects the relative weights which e planners attach to such criteria of remuneration for ork as skill, education, work conditions, geographical cation or economic priority. The employment income the individual depends in the first instance, therefore, n the provisions of the wage system itself. Secondly, it depends on the place allotted to him by his employer within this system. This decision of the enterprise or institution is a function of the individual's qualification on the one hand (representing the element of supply) and, on the other, of demand as laid down in the employment and wage plans handed down to it by the superior authorities. Thus, complete observance by the enterprises of employment and income targets should result, in principle, in a harmonious fulfilment of the main desiderata of employment-income policies formulated at a national level.

In the experience of most of the countries of the area there have been many and frequent departures from the planned consonance of targets, the reasons for which can be sought in conditions affecting both the supply and the demand for labour. On the supply side, the non-agricultural labour market has been under continuous pressure, due to the influx of rural emigrants and to the demand for employment from urban labour reserves seeking additional sources of family incomes. This coincided, particularly in the earlier periods, with the actual encouragement, or at least tolerance, by the planners of "over-employment within factory gates", based as much on social as on economic considerations. On the other hand, the existing systems of incentives in the enterprises did little to discourage management from hoarding labour at a time when the system of bank control over wage expenditure was not stringent. Thus, employment plans often tended to be exceeded, contributing to the over-fulfilment of wage-fund targets, with adverse consequences for market stability. These tendencies were frequently reinforced by some weaknesses of the wage and salary system, particularly in the earlier stages of postwar development.

The evolution of the wage system

The wage and salary system as developed in the Soviet Union in the early phases of the planned era, and followed rather closely in all eastern European countries after the transformation of their economic systems, consists essentially of two parts: one providing a rather rigid framework for the determination of basic wages and salaries and another, much more flexible, encompassing a complex system of premia and bonuses linked to various incentive objectives (see Chapter 8, section 8.2).

In a centrally planned economy the wage system is a tool. It serves to assist implementation of the incomes policy, which itself is an instrument of the general development strategy. This link was seen particularly clearly in the early period of rapid industrialization, with its reliance on the intensity of individual labour input. Workers were put, whenever feasible, on a piece-rate system of remuneration, and a high intensity of labour was further encouraged by the payment of progressive premia for extra effort and the toleration of relatively easy work-norms. Differential rates and work-norms were so set as to encourage the movement of labour to the priority sectors, industry and construction above all, and to development areas, reinforcing other measures intended for the purpose.

Not unnaturally, these emphases tended to come into conflict with other objectives of the wage system and policy. Firstly, promotion of improvement in the structure of skills was impeded, a stimulus for acquisition of higher skills — a "vertical mobility of labour" — being minimized in conditions in which an unskilled labourer could earn as much as, and often more than, a skilled worker or a non-manual specialist. Secondly, the reliance on individual premia made control over the changes in the global wage-fund difficult, and contributed to a wage drift everywhere; and the situation was aggravated wherever premia were paid on a progressive scale, and/or the revision of working norms did not keep pace with improvements in technology.

These shortcomings were brought into sharp relief in the later stages of economic development when the policies of growth maximization gave way to the quest for rationalization and optimization of production processes. Technological progress itself demanded more emphasis on the quality aspects of the labour force, and measures had to be taken to re-establish the role of basic wages in total earnings by reducing the excessive incidence of individual premia and bonuses, as well as by tightening loose norms which generally benefited piece-rate workers. The introduction of these measures also served the purpose of containing somewhat the unplanned growth of the wage-fund, which the planners were no longer so willing to tolerate. These were the main goals of the major wage reform which began in the Soviet Union in 1956 and of which the broad lines were followed in all other countries of the area. It brought in its train a sharp increase in the share of time-workers at the expense of those on piece-work, and a replacement of premia based on individual performance by those awarded for collective achievements. Tighter relations between the growth of wages and productivity were instituted everywhere. In some countries the basic wage and salary rates of workers in "non-productive" sectors, whose earnings had tended to lag behind during the earlier periods, were revised upwards.

The reforms of the planning and management system during the later stages of the period under study gave new dimensions to the role of the wage and salary systems. The shift from administrative to economic levers and the trend towards a devolution of economic decision-making to the enterprise required that effective material stimuli be introduced for enterprise management. Although the methods chosen by the various countries differed rather widely, they have nevertheless some features in common. Thus there has been a general tendency to replace the global output targets by a synthetic indicator of enterprise success, related usually to some measure of profitability, the latter governing the size of the additional funds put at the disposal of the enterprise for distribution among its personnel. But it is clear that the measures taken in various countries have until now been more in the nature of experiments than final solutions.

Differentiation and dispersion of income from employment

(i) Sectoral and branch differentials

Differences in average earnings of wage-earners between economic sectors and industrial branches are to a large extent the outcome of such factors as the skill and sex structure of the employed labour force. Nevertheless, one of the objectives of the standing regulations incorporated in the wage system has been to ensure that general levels of earnings vary sufficiently between sectors and branches to influence workers' choices. Such stimuli have been justified by the generally free movement of the labour force — the direction of which has also been influenced by vocational training policies, priority housing schemes and, in some countries, moral pressure exercised through the party and youth organizations.

At the beginning of the period under study, levels of earnings were in most countries — particularly in the Soviet Union and Poland — markedly lower in the non-productive sectors, such as communal services, public health, education or finances than in the productive sectors. If anything, this gap widened somewhat for some years thereafter, but tended to narrow subsequently. As a result, inter-sectoral differences were not substantially different at the end of the period from the 1950 pattern. Given the stress on the expansion of investment projects, it is not surprising to find that construction was — throughout the period and in almost all countries — the leading sector with regard to the wage level, industry usually occupying only second place. Outside Bulgaria and, in the earlier years, Poland, the differences were not, however, very significant. On the other hand, wages in the trade sector remained throughout on a considerably wer level, being some 30-35 per cent below those in dustry in the extreme case of the Soviet Union.

The relative stability over time of the pattern of differ- tials was also characteristic of industrial branches. feature of this pattern has been the relative advantage joyed by such branches as fuel, mining and metallurgy er other branches. Textiles, clothing and food processing variably occupied the lowest position. There has, owever, been considerable variation between countries the dimension of the inter-industry spread. Thus, the p between the highest and the lowest paid branch nounted to only about 50 per cent in eastern Germany it reached around 100 per cent in Poland.

(*ii*) *Skill and occupational differentials*

It has been a part of the image of a socialist society at the traditional differences in the living standards of anual and non-manual workers should largely disap- ear. The social transformations of the late 1940s brought bout some immediate changes in the relative earnings these groups. Nevertheless, at the beginning of the eriod under study, the average level of earnings of the on-manual category (conventionally defined to include e administrative and clerical workers with the exclusion the engineer-technician group) was still above the level manual workers in most eastern European countries -in some of them (Hungary and, to a lesser extent, oland) by a wide margin. Developments during the rly industrialization phase completely wiped out these fferences in average incomes. Moreover, the privileged osition of the manual workers was manifested at that me also in an allocation of supplies and housing which voured the productive sectors and productive workers. y the late 1950s this levelling up process was generally onsidered to have gone too far, and the trend was halted even reversed. This was particularly true of the ngineer-technician group, whose salary levels also went own in relation to manual workers in the early 1950s, ut subsequently regained some of the lost ground in all e eastern European countries. In the Soviet Union, e change in the pattern of these relatives occurred ainly in the 1930s, when the average income advantage njoyed by the white-collar category went down from bout 50 per cent to less than 10 per cent. The gap con- nued to narrow, though at a slower rate, in the 1950s, ut — as in the eastern European countries — a reverse end set in in the 1960s. The salary level of the engineer- chnician group was in the early 1930s more than 2½ times gher than the average pay of manual workers, but this tio had fallen to less than 1½ times by 1964, when it as generally thought to be too low; but the wage and lary revisions instituted in that country in 1965-1966 ent some way towards restoring the desired propor- ons.

Except for some lower clerical groups, the distinction etween manual and non-manual workers (including, r this purpose, also the engineer-technician category) is the centrally planned economies — as also in the market onomies — largely identifiable with the breakdown to wage- and salary-earners; and within each of these rge groupings skill differentials are to a large extent determined by the wage and, respectively, salary scales. However, as there is generally a tendency for the various premia and bonuses to favour the higher skills, the spread of final earnings is in fact usually wider than the scales provide. The data referring to industrial branches in the early 1960s indicate a wide variation between countries with regard to the ratio of the highest to the lowest tariff grade. These multiples hardly exceeded the ratio of 2:1 in Bulgaria and Rumania, but were for a number of branches higher than 3:1 in Poland and the Soviet Union.

The patterns of salary scales lend themselves much less to generalization. The reason is that, as in market economies, salary rates usually encompass rather wide ranges which, moreover, vary greatly for the same occupation according to the importance of the enterprise or institution (in the highest category of Soviet industrial enterprises, the salary scales of directors are three times higher than in the lowest category). According to a survey carried out by a Soviet authority in the field, director's salary scales were less than twice as high as those of a foreman in Bulgaria, Poland and eastern Germany, but three times as high in Czechoslovakia.

As for other income differentials, that between men and women has both social and economic implications. The principles of equal pay for equal work and of no sex discrimination are universally recognized. In practice, in spite of their very considerable advancement in education and vocational training, both in absolute terms and in relation to men, women's average earnings are everywhere markedly lower, almost irrespective of whether the comparisons refer to groupings by sectors, branches, skills, occupations or educational standards. The main reasons can be sought partly in the differences in physical endowments (which are particularly evident in the data on the allocation of women to manual workers' grades) and partly in the survival of prejudices that often prevent women from obtaining positions of responsibility. Only the latter can explain why earnings of women are generally about one-fourth to one-third lower than those of men, even in such predominantly female sectors as health, education or trade services.

(*iii*) *Dispersion of income from work*

The spreads of earnings observed between sectors, branches, skills, occupations, etc. are merged in the frequency distribution of wage- and salary-earners arranged according to the size of their earnings. The range and the dispersion of this distribution is of importance to the planners in that it provides an indication of the scale of earnings actually utilized or potentially available for differentiating rewards according to the economic merits of the work performed.

The available statistical information suggests that there has been a general tendency for the spread of wage- and salary-earnings (measured by the inter-quartile deviation or the quartile ratio) to narrow over the period under review, particularly in the aftermath of the wage reforms initiated in the mid-1950s. These trends can be attributed to the reduction in the number of tariff grades following the wage reform, and to the generally prevailing policies of granting a more than proportionate wage increase to workers in the lower income brackets, chiefly by means of raising the statutory wage minima. At the other end of the scale, the elimination of the progressive premia and the tightening of loose work norms tended to cut off the upper ranges of wage income. Nevertheless, there have been forces acting in the opposite direction. Thus, technological progress demands a continuous adjustment of work norms, but this has usually proved difficult to effect, with the result that norms became rapidly obsolete and easy to overfulfil. The linking of gains in earnings to productivity improvements tends also to widen the gap between piece-rate and time-rate workers, as well as that between productive and non-productive workers in general. Finally, the increased importance attached to premia derived from profits in the latest round of management reforms may also be expected to contribute to a widening of the spread of earnings, particularly in the salaried group.

Between countries, the spread seems to be markedly wider in Poland and the Soviet Union than in Bulgaria, Czechoslovakia and Hungary. The conventional measures of dispersion seem, in this respect, to confirm the trends in various differentials observed previously. Polish data, broken down by sectors, branches and the manual/non-manual categories, show that the dispersion of employment incomes is consistently wider among men than among women workers, but similar data for other countries are scarce.

There are virtually no data available on the differentiation of peasant incomes by size. The elimination everywhere of the rich peasant class has certainly reduced the spread considerably. On the other hand, the problem of eliminating differential rent, by price or fiscal policy, has not been wholly resolved, with the result that there are quite wide differences in incomes between collective farms, reflected also in the personal incomes of their members. Moreover, given the often steep differences between state and free-market prices for agricultural products, easy access to town markets is often responsible for the relatively high profits earned by some farms. At the same time, proximity to industrial centres offers randomly distributed opportunities for some peasants to add occasional wage incomes to those earned in agricultural activities. On the other hand, the process of monetization of peasant incomes, and the growing practice of replacing the labour-day dividend system by a fixed wage pay-roll may create conditions for some narrowing of the dispersion of personal incomes in the near future.

The inter-relationship between productivity, income and resource allocation

It is a truism to say that in conditions of price stability, unchanged technology and stable structure of final demand, labour incomes increase in parallel with output, or average labour incomes in line with productivity. But it is of great interest to planners to study the dynamics of the latter inter-relation when these assumptions are dropped. The relatively recently applied techniques of input-output analysis make it possible to establish quantitative relations which provide useful policy guidance to the planners by indicating the potential impact of changes in one variable on the behaviour of the others. To illustrate the potentialities of this type of analysis, a model was employed (see Appendix 8.I) in order to show, by an example drawn from Polish and Bulgarian experience, the inter-dependence between income and output changes in four broad material production sectors (agriculture, consumer-goods industries, investment-goods industry and other sectors) resulting from various assumptions regarding changes in the final demand components. The model also permits the determination of the "multiplier" effect of autonomous changes in a particular component of final demand (collective consumption, investment or foreign trade) on the change in deliveries for private consumption necessary to secure the equilibrium of supply and demand.

As the value of income from work is not very different in centrally planned economies from the personal consumption aggregate, the gap between this income and total output determines to a large extent the volume of funds available for investment and collective consumption, and the change in the ratio of average employment income to overall productivity indicates the direction of forthcoming modifications in the main uses of national income. The policy of rapid industrialization demanded maintenance of a gap, and this usually favoured investment, although collective consumption also tended to benefit.

Given the uneven growth of productivity between the main sectors of the economy (such as agriculture, industry, services) and the differing strength and effectiveness of the built-in links between income and productivity within each sector, changes in the ratios of average income to productivity would find their own pattern of income differentiation if not interfered with. But planners can resort to other instruments for exercising control over sectoral differentials in income. Thus, price policy measures are particularly relevant for maintaining desired urban/rural differentials, whereas modifications in the wage system — such as a revision of basic wage rates — may be introduced to correct the natural tendency for the earnings of productive workers to grow faster than those of "non-productive" employees.

Unfortunately, almost no statistics exist to illustrate the extent, if any, to which gains in productivity in one economic sector over the period under study were actually shifted to benefit the workers of another. One reason is a general absence of meaningfully comparable data on sectoral productivities. On the other hand, it is possible to compare, for a number of countries, changes in industrial branch wage levels and productivities. Such a comparison shows that during the period under review there has been some redistribution of productivity gains in favour of workers in the low-paid consumer-goods industries on the one hand, and of those in the priority branches of fuel and metallurgy on the other, and that this happened largely at the expense of those branches where productivity grew relatively fast, such as chemicals and engineering.

11.4 FORMATION AND PLANNING OF FAMILY INCOMES

It was noted before that in the centrally planned econo- ies the basis for the distribution of income from em- loyment among individual earners is, in principle, their ontribution to the productive process. However, reward r work performed is not the only determinant of indi- dual welfare. From the point of view of living standards, e way these individual wage incomes "cluster" in onsumption entities, usually associated with the family nit or the notion of a "household", is of prime impor- nce. Secondly, family welfare is a function of the cidence of other forms of incomes, such as social enefits in money and in kind. Finally, the levels of wel- re enjoyed by individual family members also greatly epend on the size of the family, that is on the number of ouths (or consumption units) which the total family come must feed. Because of the generally high incidence the centrally planned economies of the first two factors entioned, as manifested in the increasingly frequent ccurrence of multiple wage incomes within the family the one hand, and in the importance of social welfare enefits on the other, the study of their impact on the ifferentiation of final family incomes is of great interest planners.

amily income from employment

There are two sources of employment income in the mily, in addition to the income derived by the head of e family from his main occupational activity: main rnings of other family members, and those resulting om family members' (including the chief earners') pplementary earnings. Consequently, the extent to hich the differentiation of family income from employ- ent differs from that of individual earners depends sentially on the strength of two inter-relationships: e correlation between the incidence of income derived om additional earnings and of job accumulation on the e hand, and the size of the main wage income of the ief family earner, on the other.

The rapid expansion of employment opportunities eated favourable conditions for continuously increasing e scope of supplementary family earnings, particularly the countries where the supply of labour was inade- uate for demographic reasons, such as eastern Germany d Czechoslovakia. The first to be absorbed into the bour force were the cohorts of the obviously unem- loyed, significantly numerous in some countries in e earlier years. The needs of the economy, combined ith the financial and other attractions of possessing nployment status, tended to induce many housewives, o, to take up a gainful occupation. In the extreme se of eastern Germany about 70 per cent of all arried women in workers' and employees' households ere in full or part-time employment in 1964, and this roportion was probably not much lower in Czechoslo- kia and the Soviet Union.[3]

There is little statistical information on the effects of job accumulation. If the Polish experience (of 1960) can be generalized, it would seem that in workers' households the contribution of this source amounts to less than 10 per cent of the total family wage income, and that its incidence does not vary by per capita family income. It is known, however, that for certain categories of skilled manual workers, such as those offering repair and artisan services, supplementary gains are important and frequent. This is also true of some highly qualified professional salary-earners in such fields as university teaching, medicine, etc. As already noted, in rural areas the combination of jobs involving a variety of activities led to the emergence of a separate peasant-worker category of employment.

Given the importance of additional sources of employment income, the next question concerns their actual incidence in relation to the wage income of the chief family earner (or the relationship between the distribution of earnings of the family head and that of total family earnings). Available evidence indicates an inverse correlation between the *number* of wage-earners in the family and the income of the family head. On the other hand, there is a tendency for the average *size* of the income of additional family earners to be positively related to the main income of the family (e.g. relatively well-paid husbands tend to have relatively well-paid wives). Thus, to a certain extent, the two inter-relations cancel out in their overall effect on the differentiation of family wage income. The effect of job accumulation seems to be less clear. Among salary-earners, both the frequency and the size of ancillary jobs seem to have a dispersion-widening influence, but this probably does not hold for the whole universe of workers and employees.

Other forms of incomes and the process of redistribution

The tabulations presented in Chapter 7 of the present study show that in the early 1960s the weight of incomes from sources other than pay for work done varied between 20 and 30 per cent of the total final income received; and, in general, the share of transfers in kind was somewhat greater than that of social benefits in cash.

With the exception of Czechoslovakia, where family allowances occupy the leading place, pensions were everywhere the weightiest category among the various money benefits received by urban households. They were also the most dynamic category in all countries (including Czechoslovakia), due partly to frequent improvements in benefits, both with regard to rates and to coverage, and partly to the steadily rising number of persons eligible for old-age pensions on account of an increase in the proportion of old people in the population.

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[3] In the less advanced eastern European countries, the share of omen in total employment outside agriculture grew from some 25-30 per cent at the beginning of the period to 35-40 per cent at its end, in spite of the fact that the sex ratio of the working-age population tended to change in favour of men. In eastern Germany and in Czechoslovakia, as well as in the Soviet Union, this share amounted to 45-50 per cent in 1965.

All countries of the region operate systems of children's allowances, but they differ markedly with regard to rates and eligibility conditions. For families with three children, the amount of allowance was an equivalent of about 10 per cent of the average wage in eastern Germany, going up to 30 per cent in the case of Czechoslovakia (see Chapter 9, section 9.1).

As with the provisions of most pension schemes, other benefits accruing from the social security system, such as sickness and maternity benefits, are everywhere made to vary with both the size of the basic wage of the beneficiary and his length of employment. All these schemes have some redistributive effect in the sense that they help persons or families in need more than proportionately, whether they be old-age pensioners with no other source of income or families with a large number of children. In some cases, this redistributive process is strengthened by the existence of progressive scales of benefits (e.g. when children's allowances increase with the rank of the child) or by a link between the size of the benefits and family income.

The income-equalizing effect of transfers in kind is very difficult to assess, but it is certainly greater than that of social security benefits. Transfers in kind, the bulk of which consists of free, or largely free, medical and educational services to the population, are as a rule independent of employment income and come near to the principle "to everyone according to his need". With respect to secondary and higher education, a universally followed principle of social policy has been to favour the sons and daughters of workers and peasants in the lower income bracket. The very considerable housing subsidy (treated usually as a part of the "social welfare fund"), and the policy of allocating housing space in general, have also provided a powerful instrument for levelling up living standards among urban families.

As in other economic systems, various fiscal measures are available and employed in the centrally planned economies to influence the distribution of living standards within the population. However, direct taxation has so far played a limited role in the redistributive process, except perhaps in its effect on the rather special high-earning group of the independent and self-employed, such as writers, artists, some free professions, and such private entrepreneurs as remain. Apart from these special cases, the maximum assessment rate ranges from about 12 per cent in the Soviet Union to about 20 per cent in Czechoslovakia and eastern Germany; and at the average wage level the actual rates paid cover the range from around 6-8 per cent in the Soviet Union, Poland, Bulgaria and Rumania to 10-11 per cent in Czechoslovakia and eastern Germany. No personal tax *stricto sensu* is collected in Hungary, where on the other hand a compulsory contribution to the old-age pension scheme is in operation, amounting to 3 per cent of the average wage. The redistributive effect of personal taxation appears to be strongest in eastern Germany and in Poland, the progressiveness of the tax being weakest in the Soviet Union.

The influence of personal taxation on the distribution of family incomes is further weakened by the fact that — partly in order not to discourage additional family employment and partly on account of administrative difficulties — the assessment falls on individual earnings rather than on combined income.

Certainly more important in its redistributive effect is the system of indirect taxes, linked closely to the formation of consumer-prices through the application of the so-called turnover tax. As the latter contains also some elements of "normal" profitability, it is usually not possible to isolate the pure tax effect. Nevertheless, it is clear that the incidence of the turnover tax falls most heavily on such luxury goods as passenger cars, high quality textiles and shoes, and some consumers' durables. On the other hand, negative tax, or a subsidy, often applies to necessities such as some foodstuffs (meat being of particular importance) or goods demand for which is a function of family size, such as children's clothing.

The importance of family size

Until now the discussion of the factors leading to differentiation of family incomes has been conducted in terms of family members only in their capacity of income-receivers, not of consumers. Yet it is clear that the living standards of individual family members depend not only on the size of combined family income but also, and overwhelmingly, on the number of persons (or consumption units) among whom this income is divided. Indeed, it can be argued that the weight of this factor is particularly great in some eastern European countries, for two reasons. First, because the frequency of households of large family size is still relatively great, in spite of a continuous decline in birth-rates throughout the period. Second, a typical eastern European and Soviet pattern of household expenditure comprises a relatively high share of items, such as food, consumption of which allows few or no economies of scale, with a resulting relatively high cost of each marginal dependant.

The greater the size of the household, the greater the number of income-earners and, therefore, the greater its income. But the chances are also that the greater the number of family members, the more numerous the dependants. In fact, it has been shown that the number of earners per family member tends to decline rapidly with the increase in family size, whereas the proportion of children rises steeply and that of old-age dependants declines somewhat. These relationships are by far the most important determinants of differentiation of per capita incomes from employment, and available empirical evidence shows that the resulting inequalities are not greatly affected by differences in the average wage per wage-earner between small and large households.

Non-wage incomes, on the other hand, tend to increase more or less proportionately with family size, and given the less than proportionate rise in wage incomes, the ratio of non-wage to wage income increases quite steeply with the number of family members, thus helping to narrow the spread of incomes between different family sizes. This effect, found for a number of countries with regard to the incidence of social benefits, is probably stronger still in respect of transfers in kind.

Another way of viewing the inter-relations described in the preceding paragraphs is to consider the effect of e various factors relevant to the differentiation of ouseholds according to per capita combined family come. Most of the data derived from special inquiries ndertaken in various countries are presented in this rm. Some findings, relating to the experiences of ungary, Czechoslovakia and Poland, confirm the onclusion that the incidence of additional employment a family does not greatly affect the per capita income fferentials. On the other hand, other incomes, consisting ostly of social benefits, contribute to some narrowing this spread (see Chapter 9, Tables 9.16 and 9.17). ome Soviet studies suggest that the effect of transfers kind is even stronger in this respect.

The results obtained from the sample inquiries must treated with caution. Some of the inter-relations ound are rather weak and do not necessarily hold for ther countries nor, indeed, for other periods of time. he comparisons for four countries of the actual disper- ons of per capita family incomes (outside transfers in ind) with those of individual earnings (see Table 9.19) show in fact that the variance of the former is distinctly greater than in the latter distributions. On the other hand, the inclusion of the benefits in kind obtained by the population from the state might change the picture by reducing or even eliminating these differences.

Whatever the direction and the impact of the relevant relations, it is clear that knowledge of them is of considerable importance in income planning. In particular, the planners need to know in some detail what influence the various measures envisaged will have on the formation of incomes and distribution of living standards; who will benefit, and to what extent, from, for instance, an increase in minimum wages or a reduction of the price of food, or an increase in the educational grant. Appreciation of the importance of these issues has been increasing in recent years. One manifestation of such interest has been the attempt in some countries to work out systems of econometric models for the study of interrelations between wages, incomes and consumption.

11.5 BALANCING SUPPLY AND DEMAND ON CONSUMER MARKETS

The historical survey provided in Chapter 7 of economic rowth and of the underlying economic policies in the entrally planned economies shows that at times policy- akers were prepared to countenance a certain degree f inflationary pressure, both with regard to global balance nd to the equilibria of individual commodity markets. ndeed, a theory was developed in the Soviet Union nd abandoned in mid-1950s) justifying the necessity r an excess of overall demand in the interest of stimulat- g output. In general, overall imbalances were charac- ristic of the earlier investment plans, but were tolerated ss later, when the policy of growth maximization tended relax and when techniques of planning and instruments f plan implementation improved in quality. On the ther hand, shortages of specific commodities resulting om artificially low prices (e.g. for meat) were main- ined throughout the period in most countries, mainly order to make them accessible to the lower income roups of the population.

The corrections of an *ex ante* gap between supply and emand at prevailing prices that occur "automatically" the market economy — through rising prices or nports — are not open in the centrally planned econo- ies except by a conscious choice of the planners. In ct, there has been a tendency in the past to tolerate hortages and queues rather than to adjust prices or to low the load to be carried by the balance of payments the full extent required to close the gap.

The problems of balancing of supply and demand in e centrally planned economies involve several stages as ell as various time perspectives. In the planning stage, oth for short- or long-term horizons, planners need to now the magnitude and sensitivity of the entries both sides of the equilibrating equation as they present potential threats to stability as well as possible medies.

Planning for short-term global balance

Two balance sheets, forming part of the general system of national accounts, are employed for the purpose of ensuring short-term consistency of supply and demand in consumer markets: "Balance of money income and expenditure of the population" and "Aggregate financial balance of the economy". The former has either an all-inclusive form, in the sense that it includes also transactions between households (and is of interest for the study of income levels and differentials), or is restricted to transactions between the household and the state sectors (and serves mainly the purpose of equilibrium planning). Peasants' consumption in kind is usually excluded from the second type of balance, as it represents a self-liquidating item, but it enters the all-inclusive type, being important in, for instance, comparisons of urban/rural levels of income or expenditure.

Within the total money receipts of population from the state sector, by far the most important category is that of wages and salaries. By the end of the period under study, this item must have accounted for between two-thirds to three-fourths of the total, depending mainly on the degree of urbanization of the country in question. Indeed, this has been not only the largest source of money incomes, but also the most difficult one to control, throughout the period of the postwar development. As already noted, targets for nominal wage-funds tended to be exceeded on account of both the overfulfilment of employment plans and, particularly in the earlier periods, excessive earnings of some categories of piece-rate workers.

Second in importance are peasant receipts from state deliveries. In eastern European countries the size of this category of income and the degree of control that could be exercised over it fluctuated largely with the vicissitudes of collectivization campaigns as well as with state policies towards peasant incomes. The forecasting of this item has proved, however, complex everywhere, particularly in view of the generally over-optimistic agricultural targets.

Changes in other categories of income flows, such as social security payments and benefits, are under stricter control, although the number of beneficiaries is often the outcome of demographic trends which can be forecast but hardly influenced (old-age beneficiaries, family allowance receivers, etc.). Finally, the role of state-granted credits in directing demand into desired channels, usually in the field of co-operative housing and purchases of some consumers' durables, has grown in recent years, but its total volume is still too small to provide a means for influencing global demand.

Some 80-85 per cent of the expenditure side of the "balance of money incomes and expenditure of population" goes on the purchase of goods and services from the state trade network. Direct taxes and fees were responsible (around 1960) for some 5-7 per cent of the total, whereas personal money savings varied from around 2 per cent in Hungary and Poland to more than 6 per cent in eastern Germany.

The inadequate volume of sales of consumers' goods, at least in relation to the plan, has been by far the most important cause of market disequilibria on the supply side. The fulfilment of investment and output plans often fell short of target in the light industries, but the situation was usually still worse in the food-processing industries, output of which was adversely affected by the frequent failure of the agricultural sector to meet its targets. Personal savings fluctuated quite considerably from year to year, and their trend could not be accurately forecast, but their volume was too small in relation to annual income (outside perhaps eastern Germany and Czechoslovakia) to influence significantly the overall balance of the economy. Nevertheless, the total accumulated volume of money balances held by the population had by the mid-1950s reached proportions important enough (about 45 per cent of total income in eastern Germany and nearly one-fourth in Hungary and Poland) to cause anxiety as a potential threat to market stability. The impact of direct taxation has obviously been too small in the past to serve the purpose of a regulator of market balances. This contrasts with the role of indirect taxes, as far as those can be identified with the turnover tax. Manipulation of the latter has been a major means of changing the prices of consumers' goods, and this regulator has been used, though rather sparingly, both to forestall inflationary pressures and to adjust *ex post* market disequilibria. As already noted, however, planners have on the whole been reluctant to use this deflationary weapon — preferring as a rule to maintain the principle of price stability of consumers' goods.

The conditions for market equilibrium in the economy as a whole can be considered from the somewhat wider perspective of "aggregate financial balance" of the state sector, which constitutes essentially a plan for financing capital formation and collective consumption. Viewing inflationary threats from this angle, the experience of the centrally planned economies points to three main sources of disturbance. First, increases in investment expenditure written into the plan have not always been backed by a required expansion of the volume of supplies for individual consumption. The resulting imbalances were aggravated when capital expenditure in money terms exceeded the plan and/or the corresponding additional productive capacity failed to come into operation as soon as was planned. A lengthening of the gestation periods of investment projects, combined with above-plan cost increases, was a general experience throughout the period under review. Second, as shown before, failures to fulfil productivity plans should be reflected — if market equilibrium is not to be disturbed — in the rate of growth of average nominal wages or in investment plans. However, should the authorities insist on the fulfilment of the investment plans, there will be an excessive increase in money incomes of the populations — and, in fact, this frequently occurred. Third, the effect of above-plan accumulation of inventories is similar to that of over-fulfilment of targets for investment outlays, since additional credits extended to enterprises will eventually find their way on to the consumers' markets.

In order to counteract the effect of these pressures, various reserves are being built into the financial plans, both for the state and the household sectors. Thus, it has been a universal practice to plan for a considerable budget surplus; and in some countries, notably Poland, the annual plans provide for a wage-fund increase greater than warranted by the employment and average wage targets. Everywhere, cautious estimates are usually made concerning expected changes in consumers' propensity to save.

The problem of partial disequilibria

The condition of equality between the total values of supply and demand is clearly not synonymous with the achievement of full equilibrium in consumers' markets, the latter requiring a consistency between supply and demand in specific markets.

As already mentioned, partial imbalances for some specific commodities may, and often have been, premeditated. The typical example is that of meat or of children's clothing, the prices of which have frequently been set below the market equilibrium level in order to make them accessible to families in lower income brackets. A more intractable problem has been the frequent appearance of unplanned shortages and/or surpluses of some consumers' goods, stemming essentially from two basic difficulties, characteristic of a highly centralized planning system. The first problem is related to inadequate knowledge on the part of the central planning authorities of consumer-preference schedules, as conventionally measured by income-, price- and cross- elasticities of demand. In the earlier stages of the period under review the generally low levels of consumption made it relatively easy for the planners to assess and forecast the probable pattern of demand. The very gains in living standards rendered these tasks infinitely more complex, eliminated the sellers' markets, and forced the planners to devote increasing attention to more thorough studies of consumers' demand. During the last decade, and particularly during the last few years, much encouragement has been given to, and some progress has been made in, researches designed to improve the techniques and scope of demand analyses everywhere.[4]

The second set of problems occurs at the stage of plan implementation. Given consumers' preference schedules, current and projected, the authorities face the problem of adapting the pattern of supply to that of demand. The related issues, involving among others the question of "success indicators" for the performance of industrial enterprises, have been at the core of the reform of planning and management that started in mid-1950s in Poland and Hungary, and which have gathered momentum in most countries of the area recently. It may be pointed out, however, that the correction of partial imbalances has to some extent also been impeded by the reluctance of planners, partly on the grounds of cost and administrative inconvenience, to abandon the principle of price stability. Moves towards a more flexible approach to price-fixing, noticeable everywhere for some time with regard to new products and to surplus goods, have evidently been gaining wider support in the latest round of management reform.

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[4] For a short survey of recent developments in this field, see Chapter 10, section 10.4.

CHAPTER 12

INCOMES POLICIES AND DISTRIBUTION IN YUGOSLAVIA

12.1. THE GROWTH OF OUTPUT AND CONSUMPTION AND CHANGES IN THE SCOPE OF INCOMES POLICIES

The postwar recovery in Yugoslavia proceeded at a very rapid rate and the pre-war level of output had already been attained by the end of 1947. At the later stage of reconstruction the first Five-year Development Plan (1947-1951) was launched, aiming at a fast increase in the savings ratio and at comprehensive changes in the composition of output and trade. The growth target stipulated by the plan was actually never achieved, but the impressive rise of the savings rate, as well as the important shifts in the structure of employment and output, provided the basis for high rates of growth in subsequent years.

The ambitious objectives of the first Five-year Plan left little scope for an increase in household consumption (which, in fact, was treated in the plan more or less as a residual),[1] the more so since owing to doctrinal reasons priority was given to the growth of collective consumption. The norms and wages were centrally decided: the former in conformity with output targets; the latter according to the available supplies of consumer goods. The prices and allocation of consumer goods were also subject to centralized decisions. Taxes (which together with social insurance contributions amounted to almost 60 per cent of the national income) swallowed all the profits of enterprises and also a large part of incomes of individual producers. Tax proceeds were allocated by the budget in a detailed way, including transfers in kind and social benefits to the population (the two items amounting to roughly 25 per cent of the final income of the population), mainly with a view to raising the savings ratio and the share of collective consumption. The wage policies in this period were strongly inspired by equalization principles.

By the end of the plan period the rate of savings, which on the eve of the war had not exceeded some 8-10 per cent, was up to 30 per cent; industrial output increased by 64 per cent over the pre-war level with capital goods marking a considerably faster advance. At the same time, important changes took place in the pattern of imports, where the share of capital goods went up to 32 per cent (1952), against 20 per cent on the eve of the war. Also, new employment was predominantly channelled into basic industries.

The end of the first Five-year Plan, however, coincided with a radical change in economic thinking which in the following years was to influence increasingly the Yugoslav approach to economic growth as well as the whole institutional set-up of the economy.

This change in economic thinking, which ultimately resulted in a decentralized system of planning and management largely based on the interplay of market forces, was mainly induced by the failure of the original set-up to promote efficient use of economic resources and to provide adequate incentives for better management and the growth of labour productivity. Parallel with the gradual implementation of institutional changes which started in this period,[2] the following annual plans, and especially the second Five-year Plan for the years 1957-1961, increasingly reflected, therefore, the desire of the Government to develop economic incentives for labour and management — a move implying a new approach to incomes and consumption and to the pattern of growth in general.

The shift in emphasis in growth policies and the changes in the management system enlarged the scope for incomes policies, which gradually turned into active promoters of growth and stability. Under conditions of growing enterprise autonomy,[3] wage policies developed into an important tool for raising efficiency at the enterprise level. With the gradual release of market forces, the wage structure became increasingly important for the sectoral allocation of production factors, while the growing proportion of resources left at the disposal of enterprises [4] tended to make incomes policies even more relevant for the actual rate of savings and stability of the domestic market. Moreover, with the abandonment of the state monopoly of foreign trade and the introduction of a single rate of exchange and a permanent customs tariff,

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[1] The pre-war level of household consumption was not reached until 1950-1951, but, due to the nationalization of industry and banking, the land reform and the pursuance of equalization policies, pre-war consumption standards of the low-skilled people and peasantry were attained some two to three years earlier.

[2] For a more detailed description of the changes in the Yugoslav system of planning and management, see *Economic Bulletin for Europe*, Vol. 10, No. 3; and *Economic Planning in Europe* (*Economic Survey of Europe in 1962*, Part 2), Chapter VII.

[3] Shortly after 1952, enterprises acquired virtually complete autonomy in decisions concerning output, norms, repurchases of factors of production, sales, wages, etc., and also a fairly high degree of freedom in the fields of prices and investment.

[4] Between 1952 and 1963 the share of tax proceeds dropped from 50 to 38 per cent, and in 1965 to 25 per cent in the primary distribution of incomes; social insurance contributions declined from 9 to 6 per cent between 1952 and 1965, and the degree of self-financing investments rose from zero in 1952 to 38 per cent in 1963, and to more than 50 per cent in 1965.

TABLE 12.1

Primary and final distribution of GNP and income of population

Billion dinars

	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
I. *Primary distribution — current prices*													
Gross material product (produced)	949	1 134	1 299	1 552	1 612	1 991	1 989	2 446	2 887	3 365	3 770	4 580	6 100
Depreciation	95	112	137	154	168	162	155	177	201	255	305	381	512
Net material product (produced)	854	1 022	1 162	1 398	1 444	1 829	1 834	2 269	2 686	3 110	3 465	4 199	5 588
Income of personal sector [a]	360	430	471	593	617	776	809	955	1 123	1 311	1 457	1 736	2 375
Taxes paid by enterprises and population	424	451	530	621	642	764	793	934	1 118	1 296	1 390	1 600*	..
Contribution to social insurance paid by enterprises	77	83	89	99	103	115	110	150	195	250	285	313*	..
Net savings of enterprises	−7	58	72	85	82	174	122	230	250	253	333	550*	..
II. *Final distribution — current prices*													
Gross national product [b] (produced)	1 019	1 214	1 401	1 665	1 740	2 147	2 174	2 654	3 128	3 632	4 073	4 935	6 432
Household consumption [c]	541	618	684	840	898	1 069	1 142	1 324	1 570	1 835	2 036	2 462	..
Total current expenditure of the general government [d]	257	259	294	297	306	334	379	415	480	556	620	631	843
Gross fixed capital formation	287	363	423	449	461	550	587	750	936	1 166	1 333	1 585	2 038
Foreign balance on current account	−37	−66	−32	−50	−33	−59	−51	−47	−57	−80	−25	−82	−177
Stocks and miscellaneous	−29	40	32	129	108	253	117	212	199	155	109	339	..
Household material consumption	523	598	660	812	864	1 028	1 096	1 269	1 492	1 755	1 950	2 305	2 963
III. *Final distribution — constant 1962 prices*													
Net material product (produced)	1 520	1 815	1 864	2 126	2 011	2 491	2 538	2 982	3 143	3 329	3 470	3 933	4 443
Household material consumption	851	982	1 051	1 145	1 144	1 306	1 361	1 607	1 711	1 910	1 950	2 190	..
Total current expenditure of general government [de]	117	125	145	155	175	230	254	295	363	427	500	581	..
Net capital formation [f] and trade balance	552	708	668	826	692	955	923	1 080	1 069	992	1 020	1 162	..
IV. *Income of population — current prices*													
1. Wages and salaries in productive activities (net)	158	164	200	233	256	342	370	482	613	741	831	1 003	1 431
2. Wages and salaries in non-productive activities (net)	70	80	102	113	128	156	185	208	240	267	300	355	455
3. Income from self-employment, property and entrepreneurship	202	266	281	364	366	437	439	473	510	571	633	733	942
4. Net transfers received from general government [g]	103	108	108	122	133	148	168	185	200	272	320	339	340*
5. Hire purchase credit (net increase)	4	11	10	6	17	22	0	22	17	42	24	139	109
6. Net transfer from the rest of the world	5	5	7	7	8	8	8	13	12	12	14	43	47
7. Miscellaneous items	4	4	3	4	5	5	10	10	36	36	34	0	24
8. Disposable income of population	546	638	711	849	913	1 118	1 180	1 393	1 628	1 941	2 156	2 612	3 348
9. Collective consumption financed directly through budget [h]	35	38	39	47	45	51	51	57	67	80*	95*	110*	120*
10. Total (1-9)	581	676	750	896	958	1 169	1 231	1 450	1 695	2 021*	2 251*	2 722*	3 468*

Sources: National statistics.

[a] Including self-investment by farmers.

[b] Gross national material product plus wage element of non-productive services.

[c] Material personal consumption plus wage element of non-productive services purchased by consumers.

[d] The current expenditure of the general government includes "collective consumption" and wage element of non-productive services not purchased directly by consumers.

[e] Including subsidies.

[f] Investments in fixed and working assets.

[g] Including social insurance.

[h] Corresponds only to material content of budgetary expenditures on health, social insurance, education and culture and communal services. However, budgetary expenditures are only a part of total expenditures on these items.

TABLE 12.2

rimary and final distribution of GNP and income of population in percentages and the growth in volume of net material product, consumption and income of population

	Average 1952-1953	Average 1957-1958	Average 1962-1963	1952	1954	1957	1960	1963	1965
. *Primary distribution — current prices*									
Net material product (produced)	100	100	100	100	100	100	100	100	100
Income of personal sector	42	43	42	42	41	42	42	42	45*
Taxes paid by enterprises and population	46	42	39	50	46	42	42	38	25*
Contribution to social insurance paid by enterprises	9	6	8	9	7	6	7	7	6*
Net savings of enterprises	3	9	11	−1	6	10	9	13	24*
I. *Final distribution — current prices*									
Gross national product (produced)	100	100	100	100	100	100	100	100	100
Household consumption	52	51	50	53	49	50	50	50	54*
Current expenditure of general government	23	17	14	25	21	16	15	13	11*
Total consumption	75	68	64	78	70	66	65	63	65*
Gross fixed capital formation	29	26	32	28	30	26	30	32	31*
Foreign balance on current account	−4	−3	−1	−4	−2	−3	−2	−2	0*
Stocks and miscellaneous	0	9	5	−2	2	11	6	7	4*
Household material consumption as percentage of net material product distributed				59	53	54	54	54	57*
III. *Final distribution — constant 1962 prices*									
Net material product (produced)	100	100	100	100	100	100	100	100	100
Household material consumption	55	53	56	56	56	53	54	56	58*
Total current expenditure of general government	7	10	15	8	8	9	12	15	14*
Total consumption	62	63	71	64	64	62	66	71	72*
Others	38	37	29	36	36	38	34	29	28*
IV. *Income of population — current prices*									
(*a*) Disposable income of population				100	100	100	100	100	100
of which:									
Wages and salaries in productive activities				29	28	31	38	39	43[b]
Wages and salaries in non-productive activities				13	14	14	15	14	14[b]
Income from self-employment, property and entrepreneurship				37	40	39	31	28	28[b]
Net transfer received from general government				19	15	13	12	13	10[b]
Others				2	3	3	4	6	5[b]
(*b*) Disposable income of population as percentage of net national income (produced)				59	56	56	56	57	60*
	Index of the increase in real terms								
	1956-1952	*1960-1956*	*1963-1960*	*1952*	*1954*	*1957*	*1960*	*1963*	*1964*
I. *Net material product (produced)*	132	156	125	100	123	164	207	259	290
Household material consumption	131	150	129	100	124	154	201	257	285
Total current expenditure of the general government	150	207	160	100	124	197	310	497	..
Others	125	154	109	100	121	173	194	211	..
II. *Real disposable income* [a]									
— total*	141	150	129	100	126	170	211	273	..
— per head of population*	134	144	124	100	122	160	193	241	..
III. *Real receipts per employed outside agriculture*	107	141	111	100	108	125	150	167	..

Sources: National statistics.

NOTE. — All footnotes in Table 12.1 are valid also for this table.

[a] Deflated by the combination of cost-of-living indices and imputed indices of cost of self-consumption.

[b] 1964.

incomes policies after 1960 came to play an active role in the promotion of the competitive position of the economy in foreign markets.

Combined with the effects of a high rate of capital formation, the new policies resulted in a rapid growth of output and consumption (see Tables 12.1 and 12.2). Over the twelve-year period under review (1952-1964), total output grew at a rate of 9.3 per cent per annum or at 8 per cent per head of population; the output of consumer goods increased by 13.8 per cent per annum and that of foodstuffs by some 6 per cent, while imports of consumer goods recorded a growth rate of 15 per cent; the annual growth rate of non-agricultural employment amounted to 6.2 per cent, resulting in a decrease in the share of the agricultural labour force from 70 per cent in 1952 to 54 per cent in 1964. The average productivity of labour [5] in the economy advanced by 8.3 per cent per annum; household material consumption by 9 per cent (7.8 per cent per head of population) and collective consumption (with all subsidies included and the current expenditure of general government) by 15 per cent (14 per cent per caput).

The proportion of the national income devoted to household material consumption (in constant prices) in 1964 was virtually the same as in 1952, despite some variations which occurred during this period. Generally speaking, the share of household material consumption tended to decline somewhat until 1955, and then remained almost stable until 1961 (except in 1956 when it rose considerably) when a rising tendency set in, mainly reflecting the impact of changes in tax policies.[6] In the earlier years (1952-1954) and again in 1958-1960 when the achievement of a high savings ratio was a major concern of the Government, progressive tax rates were applied to enterprises' income with a view to retarding the growth of wages in relation to the growth of productivity. In 1961, however, flat tax rates were introduced and wages were allowed to grow parallel with productivity. A temporary departure from this policy occurred between 1962-1964 when the Government decided to reduce somewhat the prevailing savings ratio (which by this time was considered to be well above the optimum) and when, in consequence, wages were permitted to rise faster than productivity. This, however, is not reflected in the consumption ratio because private savings were rising rapidly.

The share of collective consumption (western concept) and the current expenditure of general government combined (measured in current prices),[7] which was rising fast during the years of the first medium-term plan, declined throughout the period under review, especially between 1952 and 1957. This decline was the intended result of the new policies aimed at promoting productivity. Experience acquired in this particular field has tended to indicate that a more rapid growth of household consumption relative to collective consumption would be a better expedient for strengthening incentives to workers since collective consumption is normally shared in an equalitarian way. In addition, there was a general feeling that the levels of collective consumption attained by 1952 were already quite high. The tendency to give priority to the growth of individual consumption by increasing the share of direct wage receipts in the total wages has been further reinforced in more recent years, especially since the introduction of the 1965 reform of the economic system. Following the latter move, the wage-tax and the rate of social insurance contributions underwent appreciable reductions, which resulted in corresponding increases in direct wages.

Briefly stated, the shares of disposable and final incomes in the period under review behaved as follows:

(i) First, the disposable income of the population accounted on average for about 56 per cent of the national income, with only minor year-to-year variations (the proportion of disposable income saved or directly invested, on the other hand, increased gradually during the period,[8] which partly explains the stagnation in the share of individual consumption measured in current prices between 1960 and 1963);

(ii) Secondly, the share of the final income of the population is estimated to amount on average to some 63 per cent of the national income, but as a result of the change in policies towards collective consumption explained above, this share tended to decline between 1952 and 1960.

In order to make Yugoslav figures comparable to those for western European countries, adjustments in prices and coverage for measuring consumption have been made. Computation on this basis indicates that in 1963 the share of household consumption in the national income amounted to some 60 per cent, and that of collective consumption and the current expenditures of general government (subsidies excluded) to some 15 per cent, against 50 per cent and 13 per cent (subsidies excluded) respectively, indicated in Table 12.2.

The following section proceeds with a closer analysis of the development of the final income of the population in the period with special regard to its most important component — disposable income.

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[5] Here and throughout the text *productivity* is defined as net output per gainfully employed worker in the productive economy.

[6] The proportion of gross national product (current prices) devoted to *total* household consumption is affected by variations in the foreign balance; it also decreased during the 1952-1954 period; it then remained almost unchanged until 1964 (partly due to rising private savings and especially after 1960) when a rising tendency set in.

[7] The combined share of collective consumption and expenditure of general government can only be followed in current prices as the series in constant prices includes subsidies introduced since 1956. These are subsidies granted to agricultural inputs, coal consumed in households, sugar, steel sheets, the manufacturing of glass containers, catering, transport, sulphuric acid, transport other than passenger, and the construction of university buildings. The introduction of subsidies was in fact a part of the Government price policy, aiming at supplying the above-mentioned products and services at prices below their actual costs. Then, subsidies were used to compensate the producers for the difference. It is certain that price adjustments carried out by the economic reform of 1965 considerably reduced the need for most subsidies.

[8] In 1952, one per cent of disposable income only went into savings; it increased to 2 per cent in 1956 and to 6 per cent in 1963.

12.2. The Growth of Final Income of the Population

General features

The final income of the population (according to the western concept) appears to have risen less than disposable ncome, although, in view of the small share of Government transfers in kind to the population, the difference n growth rates of the two categories does not seem to be of any real significance.

Disposable income in nominal terms rose (during the 1953-1963 period) by 378 per cent. In real terms, the rise amounted to 173 per cent, and per head of the population to 141 per cent (150 per cent per gainfully-employed person).[9] The annual rate of growth — 8.3 per cent per caput (8.6 per cent per gainfully employed) — corresponded to the average per capita output productivity growth rate. The total increment in the nominal disposable ncome in 1963 compared with 1952 was accounted for by the following factors in the following proportions: change in prices, 34 per cent; increase in employment, 8 per cent; rise of productivity, 56 per cent; all other factors, 2 per cent. The contributions of the various factors to the increment in the disposable income in real terms were as follows: rise of productivity, 84 per cent; increase in employment, 12 per cent; other factors, 4 per cent.

The composition of the disposable income of the population can be regarded as a function of the changes in employment and productivity in individual sectors of the economy, changes in relative prices and the welfare and redistributive policies of the Government. With rather significant variations in all these elements, the structure of the disposable income in Yugoslavia in the period under review underwent a number of important shifts (see Table 12.2). Thus, the share of wages and salaries in productive activities rose from 29 per cent in 1952 to 43 per cent in 1964, while the proportion of wages and salaries in non-productive activities remained virtually unchanged. At the same time a decline occurred in the shares of other types of income: that of income from self-employment, property and entrepreneurship went down from 37 per cent to 28 per cent, and the share of net transfers decreased from 19 per cent to 10 per cent. Among the remaining components of the disposable income, which together did not exceed 5 per cent of the total at the end of the period, particular mention should be made of receipts from abroad which, due to the growing labour emigration in the later years, increased from 5 billion dinars in 1952 to 47 billion dinars in 1964. A similar trend was observed in hire-purchase credits, the steep rise of which was closely connected with the upsurge in output of durable consumer goods. Thus, the gain in the share was on the side of wages and salaries in productive activities, receipts from abroad and hire-purchase credits while the loss was on the part of all others, except wages in non-productive activities which remained unchanged.

As shown in Table 12.1, 99 per cent of the disposable income in 1952 and 94 per cent in 1963 was used for personal consumption. The rate of personal savings in more recent years amounted to some 6-8 per cent of the total but a part of the amount saved went back to consumption through consumer credits. The small proportion of personal savings tends to increase the importance of the disposable income as a category for consumption planning.

The factors of growth of disposable income

The factors which determined the growth of disposable income in the period under review were primarily related to changes in the volume and composition of output and employment, but also to the various Government policies which in one way or another affected prices, the distribution of national income, the sectoral terms of trade, etc. Since none of these factors remained constant over time and since their effects on the various types of income were not uniform, an aggregative analysis would produce but meagre results. An attempt will be made, therefore, to relate the various growth factors to each of the four main components of disposable income — i.e. income of wage-earners in productive activities, income derived from employment in non-productive services, transfer payments and farm income. This procedure also contributes to a better understanding of the structural shifts in disposable income, discussed in the preceding subsection.

Income of wage-earners in productive non-farm activities

Table 12.3 indicates the growth of wage incomes and the relative importance of the main growth factors. Among the latter, it is possible to distinguish the effects of the changes in prices, employment and productivity, while the effects of the various policy measures — normally comprising wage and employment policy as well as those which tend to favour or disfavour certain social groups — have had to be combined under the common heading *redistributive policies of the Government.*

As shown in the table, over the twelve years (1952-1964) the nominal wage bill in productive non-farm activities increased ninefold. Since the cost of living doubled during the period, the rise in real terms was more than fourfold; this, computed on a per caput basis, corresponds to an increase of 98 per cent, or to an annual growth rate of 5.9 per cent. It appears that 36 per cent of the increment in the nominal wage income between 1952 and 1964 was due to the increase in prices, 38 per cent to the increase in employment, 20 per cent to the rise of productivity, while the remaining 6 per cent were accounted for by the effects of Government policies in favour of the wage-earners and other factors. Fifty-eight per cent of the increment in real income, however, was accounted for by the larger employment volume, 32 per cent by the rise of productivity and 10 per cent by Government policies and other factors. These proportions also reflect to a large extent the relationship between the factors of growth of

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[9] The nominal income has been deflated by combining the official cost-of-living index (computed only for urban population) with an estimate of the change in the cost of the farmers' basket.

TABLE 12.3

The factors of growth of non-farm income, 1952-1964

	Index of change 1952 = 100				Percentage distribution of increment in 1964 over 1952
	1957	1960	1963	1964	
	A. Wages in productive non-farm activities [a]				
1. Wage bill — value	216	388	636	906	100
2. Cost of living	128	149	189	211	36
3. Wage bill — volume — 1963 prices	169	260	337	429	
4. Employment	141	176	201	217	38
5. Per capita real wages	120	148	167	198	26
6. Productivity in non-agricultural sectors	119	134	154	163	20
7. Redistributive effects	—	110	108	121	6
8. Per capita nominal wages	156	222	318	418	—
	B. Wages in non-productive activities				
1. Wage bill — value	223	343	507	622	100
2. Wage bill — volume — 1963 prices	174	230	268	295	
3. Employment	141	159	176	194	37
4. Per capita real wages	123	145	152	152	20
5. Per capita nominal wages	158	216	288	321	
	C. Incomes derived from social benefits				
1. Total transfers (gross) — value	156	243	406	457	100
2. Pensions, invalids	159	297	620	..	46
3. Children's allowances	108	142	182	..	12
4. Health support	244	367	585	..	40
5. Others	150	300	500	..	2
6. Real value of transfers	122	163	215	217	—

Sources: National statistics.

NOTE. — (1) Wages mean wages and salaries. (2) Indices are computed in descending order except for the last item in each section. The data concerning wage bills, cost of living, employment, output and all elements of income derived from social benefits are provided by current statistics, while the others are derived.

[a] Excluding private handicraft and forestry.

non-agricultural output in the period, the increment of which was due two-thirds to the increase in employment and one-third to the growth of productivity.

The growth trends of wage income were not uniform over the period. The rates of growth of the latter reflected the fluctuating trends in the economy as well as the various changes in Government policies, which are discussed in greater detail in section 12.3. Between 1952 and 1957 the nominal and real wage bills increased annually by 17 and 11 per cent respectively; between 1957 and 1960 the corresponding annual increases amounted to 21 and 15 per cent; between 1960 and 1964, to 24 and 13 per cent. The relative contributions of the growth factors to the increment in the nominal wage income in the three sub-periods mentioned were as follow: the change in prices: 31, 25 and 43 per cent; the change in employment: 45, 39 and 24 per cent; Government policies and other factors; 0.15 and 10 per cent; the contribution of the rise in productivity remained fairly stable throughout the period, varying from about 21 to 24 per cent.

The high contribution of the increase in prices to the increment in the total wage income was the result of several price reforms and inflationary pressures which significantly gained in strength after 1960. The impact of price reforms, which aimed at a gradual elimination of the price disparities introduced in the years of the old system of central planning and management, also increased in the early 1960s. The even higher contribution from the rise of employment, on the other hand, was a logical consequence of the Government policies which, in this period, aimed at transferring a significant part of the redundant agricultural labour force to more productive employment and, more generally, to making the most of the cheapest production factor in the process of economic development of the country. The progressive tax rates on the profits of enterprises which prevailed until the beginning of 1961 acted as a stimulus to the latter to expand employment; this tendency was reinforced by moral pressure exerted on enterprises by the local governments (communes), which derived the bulk of their revenue from income-tax. However, the introduction of flat tax rates at the beginning of 1961, together with the growing autonomy of enterprises to decide about wage increases (including the discontinuation in 1958 of the centrally-fixed average wages by four types of skills),[10] resulted in a decline in the contribution of employment to the growth of wage incomes and in the growing importance of the productivity factor. In addition, as already stated, the permission given to enterprises between 1962-1964 to increase wages faster than productivity enhanced the role of the redistributive Government policies. It is generally expected that the recent improvements in the system of labour remuneration within the framework of the self-management system will further increase the role of productivity in the growth of wage incomes.

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[10] See pages 11-12.

Income from employment in non-productive activities

From 1952 to 1964 the nominal income from employment in non-productive services rose more than sixfold while real income increased threefold. Real income per head increased by 52 per cent, which corresponds to an annual growth rate of 3.6 per cent, but the latter tended to vary a great deal in different sub-periods. The rise in prices accounted for some 43 per cent of the increment in nominal terms, while changes in employment and productivity (assumed to have accounted for the total increase in the real income per head) contributed 37 per cent and 20 per cent respectively. Income per capita rose less fast than income from productive activities, meaning that the gap between the average of the two tended to narrow. In 1952 the average wage in productive activities corresponded to only 50 per cent of the average wage in non-productive activities; by 1963 this figure had risen to 64 per cent.[11] This was the expected result of a faster improvement in the structure of skills and occupations as well as of better techniques in the productive sphere of the economy than in the non-productive sectors, but account should also be taken of the fact that while changes in wages reflect, in principle, changes in productivity, the salaries in the non-productive sectors (which in Yugoslavia are publicly owned) are administratively adjusted, and often with a considerable time-lag.

Generally speaking, no significant changes occurred in Government policies in respect of this sector during the period. The Government has consistently adhered to the principle that differentials in income should reflect differences in skill and performance. It should also be pointed out that, with the development of the system of self-management and the new forms of remuneration based on efficiency, the authorities intend to reduce employment in virtually all administrative services.[12]

Social benefits

Income derived from social benefits grew more slowly than any other component of disposable income : the increase between 1952 and 1964 amounted to 357 per cent in nominal terms, and 117 per cent in real terms. The sluggishness was mainly due to an appreciable slowdown in the growth of children's allowances, which, in nominal terms, rose (between 1952-1963) by 82 per cent (in line with the growth of employment minus those employed having some property), but declined in real terms per receiver. The proportion of children's allowances in total social benefits amounted in 1952 to 46 per cent; in 1963 the corresponding figure was only 21 per cent, and contributed some 12 per cent to the increment in income from social benefits. It appears that this type of social benefit had been set too high at the beginning of the period,[13] and had thus tended to act as a disincentive to workers to acquire higher skills. It has been a deliberate policy of the Government to let children's allowances be deflated by subsequent price and wage rises. There is no evidence, however, that this change in policy towards children's allowances has tended to raise the activity rate of population. On the other hand, since 1953 a certain decline in the activity rate has taken place owing to the lengthening of the school age.

The highest rate of growth among the various social benefits was registered in pension, invalid and other social donations, whose share in the total went up from 27 per cent in 1952 to 41 per cent in 1963. However, 65 per cent of the increase in this category was accounted for by the increase in the number of receivers and only 35 per cent (or 2.5 per annum) was due to the rise of receipts per caput. Although with a time-lag, nominal pensions have been subjected to occasional upward adjustments (which contributed up to 46 per cent to the total increment in all social benefits); it is expected that in future an automatic mechanism of adjustment will be able to keep pensions in line with the growth of corresponding salaries.

The next important item of social benefits, sick leave benefits, rose rather fast, reflecting the rising number of beneficiaries. Its share in the total increased from 25 per cent in 1952 to 36 per cent in 1963, and its contribution to the increment in the value of all social benefits amounted to 40 per cent.

Farm income

The major factors of growth of farm income were the growth of the volume of sales, changes in prices and productivity, but policy measures such as subsidies, other price supports, taxes, delivery systems, etc. also played an important role. As shown in Table 12.4, sales to the Government (corresponding to some 28 per cent of the total output in 1958-1960, but to 41 per cent in 1963) are estimated to have risen between 1952 and 1963 by 530 per cent in value, and by 150 per cent in real terms; on the other hand, the value of direct sales to the population in the same period (about 23 per cent in 1952 and 19 per cent in 1963 of the value of output) increased by some 170 per cent while the sales volume remained virtually unchanged. The different trends of the two categories of sales reflected substantial changes in the composition of output during the period, as well as the effects of the system of guaranteed minimum prices and the increase in the share of the socialist sector in total output. Self-consumption in nominal and real terms is estimated to have increased by 264 and 37 per cent respectively. The total farm output (net of inputs from agri-

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[11] In recent years the tendency in eastern Europe has been in the opposite direction.

[12] Under the present system, only the total budgets of the various ministries and offices are decided centrally; the size of average salaries, therefore, is inversely related to the number of employed.

[13] In 1952, allowances for one child amounted to 50 per cent and for two children to 80 per cent of the total wage of an unskilled worker.

TABLE 12.4

Factors of growth of farm income, 1952-1963

Index of change 1952=100 (in brackets 1952/53=100)

	1957	1960	1963	Percentage distribution of increment in 1963 over 1952
1. Sales to the Government	148	258	630*	
2. Other sales	206*	200*	270*	
3. Self-consumption	237*	262*	364*	
4. Above total *(global value minus input from agriculture)*	206*	246*	413*	
5. Purchase of inputs	199*	274*	462*	
6. Net income overall *(value)*	278 (230)	309 (255)	516 (426)	
7. Taxes, and savings of state farms and co-operatives	1 618 (593)	1 518 (556)	3 264 (1 197)	
8. Net personal income *(value)*	207 (183)	244 (216)	370 (327)	100 (100)
9. Cost of farmers' basket [a]	107	113	125	13 (16)
10. Real personal income	193 (171)	216 (191)	296 (262)	
11. Number of farmers	94	91	87 (88)	— 7 (— 8)
12. Real income per farmer	205 (180)	237 (208)	340 (298)	
13. Productivity	193 (158)	204 (165)	224 (182)	66 (52)
14. Redistributive effects	106 (114)	116 (126)	152 (164)	28 (40)
15. Nominal income per capita	221 (191)	272 (236)	425 (369)	
16. Agricultural prices [b]	153	166	265	
17. Agricultural terms of trade [c]	123	122	162	
18. Subsidies to inputs *(billion dinars)*	28.8	29.2	35*	
19. Premia payments *(million dinars)*	—	2.7	25*	

Sources: National statistics.

NOTE. — A slight discrepancy between indices of redistributive effects and of terms of trade is due to subsidies to inputs and to premia payments which are included in terms of trade but not in the value of sales. Subsidies were introduced some time in 1956.

Indices are computed in descending order except those explained in footnotes *a*, *b* and *c*. Items 1-8, 11, 13, 18, 19 are provided by national statistics and others are derived.

[a] Calculated on the basis of baskets of farm households.

[b] Index is derived by the division of the index of output in current prices by the index of output in constant prices.

[c] Calculated on the basis of the structure of farm expenditures.

culture) increased in the same period by 313 per cent in value, and by some 60 per cent in volume. Since the volume of net farm output rose by 95 per cent, it would appear that the contribution to the growth of productivity of inputs from the non-agricultural sectors (which, in addition, were subsidized) was quite significant in the period. Despite a steep rise in taxes and the savings of state and co-operative farms, the personal income of farmers increased by 270 per cent in nominal and by 196 per cent in real terms, which, due to the 13 per cent decline in farm employment, resulted in a 240 per cent rise of real income per head.[14] Given the fact that the growth of productivity during the period did not amount to more than 124 per cent, it is obvious that the effects of Government policies favouring farmers were quite significant. In fact, these policies resulted in an improvement of the agricultural terms of trade of some 60 per cent. Altogether, the increment in the total personal income of farmers over the period was accounted for as follows: 13 per cent by the rise of the cost of living, 66 per cent by the growth of productivity, and 28 per cent by Government policies, while the decline of the labour force resulted in a negative contribution of about 7 per cent.

The above picture, however, looks more varied if the analysis is conducted by sub-periods, partly due to the variations in the growth of agricultural output but partly also to the rather frequent changes in economic objectives and policies. The years 1952-1957, when agricultural output was rising by 13 per cent per annum, were characterized by the abandonment of collectivization, the discontinuation of compulsory deliveries to the state and the first upward adjustments of agricultural prices (but the progressive taxes on farm income were still in force). The annual growth rate of real farm income in this sub-period amounted to 14 per cent, and to 15 per cent per head of active population engaged in agriculture. About 7 per cent of the increment in total income corresponded to the increase in the cost of living (as measured by the change in the cost of the farmers' basket), 93 per cent to the rise in productivity, and 6 per cent to the effects of the policy factor, while there was a decline of 6 per cent due to a decline in the labour force.

Between 1957 and 1960 the annual growth rate of agricultural output fell to 1 per cent. The rate of growth of the real personal income of farmers declined to slightly less than 4 per cent (5 per cent per caput), against a 2 per cent growth rate of productivity. The Government

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[14] These figures would be somewhat different if the year 1951 were taken as the basis, since 1952 was a poor agricultural year. However, 1963 was not a prosperous year either. (See the figures in parentheses in Table 12.4.)

(acting through the co-operative trade network) succeeded through its monopsonistic position in slowing down the increase in agricultural prices; prices of inputs were permitted to rise faster than prices of agricultural products. However, due to the introduction of subsidies and the reduction in the tax burden (now levied on cadastral income), income rose faster than production, although for methodological reasons this was not reflected in the figures indicating agricultural terms of trade.

In the 1960-1963 period, agricultural output was still increasing at a slow pace (1.7 per cent per annum) while the real personal income of farmers expanded 11 per cent annually (12.7 per cent per caput), against a 3.3 rate of growth of productivity. Government policies, which played a crucial role in the rapid growth of farm incomes in these years, were centred on further adjustments of agricultural prices and were inspired by the following considerations: first, the slow growth of output in the preceding years was a clear indication that the earlier improvements in the agricultural terms of trade had not been adequate; secondly, the decline in agricultural employment, which had been deliberately promoted in earliers years, began to raise the problem of the agricultural labour force, and thought had to be given to a more adequate remuneration of family labour in order to slow down the exodus; thirdly, in the wake of the decentralization of the economic system, and more particularly the decentralization of investment resources, the self-financed ratio of agricultural investment, as well as the ability of the farmers to obtain credits, had to be raised. To meet all these various exigencies the Government decided to increase gradually prices at which the co-operative trade network was purchasing agricultural products, which, in fact, acted as minimum guaranteed prices, so that in 1964 prices paid to producers rose by 79 per cent in comparison with their 1960 levels. Following the 1965 reform, a new increase of 30 per cent took place in producer prices, and it is generally considered that their present level corresponds to the level needed for ensuring adequate incentives to agricultural production. The terms of trade of agriculture after the reform were further improved by increases in subsidies, which more than offset the effect of price increases in agricultural inputs.

The final result of all the above changes was a narrowing of the gap between non-farm and farm per capita incomes. Such a gap, however, continues to exist, mainly reflecting the differences in net output per caput (now computed at more adequate price relatives) of the non-agricultural sectors of the economy, on the one hand, and agriculture, on the other. In 1952/53, earnings per head in agriculture amounted to only 35 per cent of the average wage per head in productive activities; in 1963 the corresponding ratio was 42 per cent. However, in appraising the difference in levels between farm and wage incomes, account should also be taken of income which farmers derive from their non-agricultural activities. Under Yugoslav conditions, the latter type of income tends to be rather important: it amounted to 21 per cent of the farmers' family income in 1957 and to 28 per cent in 1963.

The comparative growth of various types of real income

The text table below indicates the trends in the growth of different types of real per capita income. It suggests that a shift in the distribution of income in favour of agriculture took place, especially after 1960. Real income per farmer grew more rapidly than productivity (and more rapidly than the real disposable income per head of population),[15] while real per capita wages in non-productive activities rose by the smallest percentage, except for income derived from social benefits which grew at a still lower rate. Real per capita wages in non-agricultural productive activities rose at a similar rate to productivity, but increased less fast than the real disposable income per head of population. These trends coincide, in fact, with the policies pursued as described in the preceding sections.

Trends in real per capita income

	1960 (1952=100)	*1963* (1952=100)	*1963* (1960=100)
Real disposable income per head of population .	193	241	125
Real per capita wages in productive non-farm activities	148	167	113
Real per capita wages in non-productive activities	145	152	105
Real income per farmer .	237 (208)	340 (298)	143

Sources: Tables 12.1, 12.3 and 12.4.

NOTE. — Figures in parentheses on the basis of 1952-1953 average.

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[15] The increase in the real disposable income per head of population does not reflect any increase in the activity rate of population. In fact, this rate was on the decline, because the education period of youth was lengthened.

12.3. DIFFERENTIALS IN WAGE INCOMES

The wage system[16]

An analysis of wage differentials in Yugoslavia presupposes a certain knowledge not only of the wage system in force but also of the various phases of its evolution. The principle according to which remuneration should reflect the quantity and quality of the work performed had been adopted as early as 1952. However, the progress in the implementation of this principle had been neither smooth nor very fast. The remuneration system as a part of the system of planning and management of the economy has been, in fact, in constant evolution since 1952. Each of the numerous economic reforms during this period had aimed, *inter alia*, at establishing a better link between wages and productivity; each of them represented a certain improvement compared with the previous state of affairs; but the improvement made was invariably of limited scope, never fully meeting the final aims of a highly dynamic economic and social philosophy. It took a lot of experimenting before the present system came into shape, and even at this stage changes leading to further refinements are not unlikely to occur.

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[16] The system described below refers to the socialist sector of the economy which in 1964 accounted for 81 per cent of GNP.

Broadly speaking, the underlying philosophy of the reforms, particularly since the mid-1950s, has been to develop an institutional set-up which would enable the workers to assume a crucial role in the distribution of each enterprise's income. The workers' collectives, it has been said, are directly responsible for the process of production; they should also be entitled to decide about the way in which the results of their productive effort ought to be shared. Accordingly, the wage bill should be primarily regarded as a part of the enterprise's income, and its variations should closely reflect those of the enterprise's results.

This approach was, of course, bound to give a new turn to the problem of wage settlement, which gradually developed into the wider problem of income distribution policies. A new system based on economic policy measures for distributing income between the enterprise and the rest of the society, in a way that would assure the link between productivity and wages, had to be gradually set afoot; secondly, it was necessary to devise a mechanism for distributing the net income of the enterprise among the various funds of the latter, including the wage bill; and thirdly, adequate methods had to be developed in order to ensure that each individual would obtain a share of the wage bill corresponding to his own contribution to the enterprise's business efficiency.

The economic reforms in the period, as well as the 1965 reform, differed in scope, but having been inspired by an unchanged trend of thought, they invariably worked in the same direction: a growing autonomy of the enterprise in running its own affairs, in deciding about the allocation of its income to wages and savings and in distributing the wage bill among individuals; the rising autonomy of the economic unit was substantiated by a gradual reduction of the tax burden and a corresponding increase in the resources left at its disposal; at the same time, the role of the workers' council (which represents the interests of the personnel employed) in decision-making at the enterprise level was constantly increasing.

The 1952 reform, which marked the first departure from the highly centralized model adopted in the early postwar years, represented the first attempt to establish a more direct link between the profit of the enterprise and the wage levels. It was decided that thenceforth the enterprise's total wage bill would be specified by the planning authorities at the beginning of each year, and that the tax liability of the enterprise should be proportionate to the size of the actual wage bill. Any profit remaining after the application of another, but highly progressive and not uniformly applied, tax could then be allocated by the enterprise without consulting any higher authorities. But, on the other hand, the leeway accorded to the enterprise was not very significant: the latter was entitled to work out its own wage scales, but these, in fact, had to follow closely the centrally established pattern. This, together with the fact that taxes on profits were discriminatory, was the major weakness of the system. However, in cases where the flat tax rate was higher than the marginal progressive tax, it provided on balance some incentive to eliminate redundant labour, with favourable effects on productivity.

The 1954 reform introduced for the first time the notion of the "enterprise income", defined as the total value of output, and also the notion of the basic wage bill which was regarded as part of the operating costs (and still computed according to average wage-scales fixed centrally for each of the four categories of skill in each branch of activity). The gross profit of the enterprise (i.e. the total value of output minus operating costs, various contributions and taxes) was this time subject to a flat rate tax, and the remaining net profit could then be allocated by the enterprise. However, the decisions of the enterprise were limited by high tax rates and by the observation of the rigorous rules set by the administrative authorities, so that the additional accruals to wages were limited and did not reflect to a significant extent the overall results of the enterprise, nor were they sufficiently differentiated according to individual contributions. Moreover, as in the previous system, this tax system also tended to encourage an undue extension of employment in each of the lower wage ranges of each of the four skill categories for which average per capita wage payments were fixed, since this permitted higher payments than would otherwise have been possible to the scarcer workers at the top of the wage range in each category.

In 1956 and 1957 the authorities decided to raise the basic wage scales, which resulted in a proportionate decrease in the taxable income of the enterprise. Moreover, the basic wage rates became a matter of agreement between the local governments (communes), trade associations and labour unions. The enterprise was also given more latitude in adapting the levels of individual remuneration to its specific conditions.[17] However, the control over the allocation of net profits was retained.

The 1958 reform went considerably further. From the global value of output, deductions had to be made providing for depreciation, material costs, differential rent, tax on capital, any turnover tax, any interest on borrowed capital, and contributions to social insurance. Wages, on the other hand, were no longer regarded as a component of the operating costs, but as a part of the enterprise's net income. The latter was to be distributed by the workers' council between wages (with the basic wage

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[17] As a result, the remuneration "ladder" underwent considerable changes. For example, in a group of 35 brown-coal mines the average rates applying in 1957 for highly-skilled manual workers ranged from 13,000 to 20,900 dinars, according to the mine, while the proportion of workers classified in that category ranged from 0.33 to 34.7 per cent; for semi-skilled workers the average rates in the same 35 mines ranged from 8,400 to 12,800 dinars, while the proportion of workers in that category ranged from 13 to 49.5 per cent. (ILO, *Workers' Management in Yugoslavia*, Geneva 1962, p. 137.)

TABLE 12.5

Breakdown of workers' personal incomes in 1958

In thousands of dinars

Grade	Hours worked *(thousands)*	Personal incomes calculated and paid in accordance with the scales or other criteria specified by the undertaking's rules			Personal incomes in addition to the pay scales (distributed surplus)	Total
		Piece	Time rates	Total		
Highly skilled workers	603	22 432	89 437	111 869	34 066	145 935
Skilled workers	3 745	222 210	262 275	484 485	108 540	592 539
Semi-skilled workers	2 009	99 854	98 239	198 093	33 697	231 790
Unskilled workers	360	10 818	19 118	29 936	4 879	34 815
Total	6 717	355 314	469 069	824 383	181 182	1 005 079

Source : ILO, *Workers' Management in Yugoslavia*, p. 231.

rates still determined by the type of agreement introduced in the 1956-1957 reform, although in a less rigorous way),[18] investment fund, social fund, etc.

Calculation of this liability started from minimal wages set at the beginning of 1958 for each post in each enterprise at 80 per cent of the tariff-wages existing at the end of 1957. On gross profit remaining after payment of minimum wages, the enterprise was liable to a steeply progressive tax. The remaining net profit was freely allocated by workers' councils but a supplementary tax on total wages (also progressive) was levied (see Table 12.5). The workers' council, now virtually free in its decisions, became, therefore, the decisive factor in the allocation of the net profit which was assumed to reflect the efficiency of the enterprise (an assumption which, owing to the progressive tax, the still very important price distortions and the various forms of state intervention, did not always correspond to the real state of affairs).

The additional part of the net profit of the enterprise accruing to wages came to be known as the "variable part", and the final wage fund (as well as the final wages of individuals) was arrived at only at the expiration of a given accounting period. The stimulativeness of this system tended to be diminished by the fact that the "variable part" was allocated as a uniform proportion to all wages. Moreover, the progressive tax made employment of unskilled personnel inexpensive to any enterprise earning a high rate of profit in relation to its minimum wage bill.

With a more energetic move towards decentralization in the years following 1961, which implied a number of changes in the tax and wage systems, the already acquired rights of the workers' council became much more effective. According to the present system, the net income of the enterprise (the value of global output minus all non-wage costs and a 4 per cent tax on capital assets) is distributed by the workers' council between wages (subject to a 10 per cent payroll tax and a 20.5 per cent contribution to social insurance), the investment fund, the social fund and the reserve fund. However, as a result of the important changes in taxation, the total resources at the disposal of Yugoslav enterprises account at present for some 70 per cent of the net material product (in primary distribution) against some 42 per cent in 1952. The wage control[19] exercised by the higher authorities is limited to preventing such wage increases which are not due to a corresponding rise in productivity or the permitted degree of compensation for changes in the cost of living.[20] The Government is responsible for fixing the guaranteed minimum wage[21] and it also tries to enforce (by means of moral persuasion) a certain degree of uniformity in rewards for similar types of work. However, account should also be taken of the fact that the high degree of decentralization of resources achieved in the last few years has tended to increase very significantly the importance of Government credit policies. The distribution of the enterprise's income as between wages and the resources allocated to the investment fund has become particularly sensitive to changes in credit policies, since for its investment activity the enterprise can rely only on its own financial means plus those obtainable from the banks.

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[18] In fact, at this stage these agreements used to set maximal and minimal wages for particular branches or sectors (1 : 4 to 1 : 8, depending on the size of the enterprise), and to fix index numbers of the difference of payments for various skills (for instance, in the timber industry the index was: unskilled 100, semi-skilled 130, skilled 150, and highly-skilled 200). This provided a greater latitude in adapting the structure of remuneration to particular situations. Jobs in enterprises could now be more adequately evaluated. Tariff rates elaborated by enterprises on this basis could now be commented on by communal and trade union authorities, but any dispute was to be settled by arbitration.

[19] In order to enable the workers' council to determine whether an increase in the wage bill is justified or not, a number of indicators have been selected and special commissions set up by communes to assist the workers' council when making the relevant decision. These commissions may raise objections, which are then decided by arbitration. The more important of these indicators are the following: (*a*) indices of total output, of output per worker and of output per unit of capital; (*b*) the proportion of output sold and the relationship between net and gross output; (*c*) changes in the degree of utilization of fixed and working capital, changes in the structure of capital (fixed and working) and in the age composition of fixed assets; (*d*) changes in gross wages per worker and in the ratio between total wages and net income of the enterprise. These indicators are intended to show the cause of any increase in net output as well as portraying the conditions under which an enterprise operates. Some of them aim at describing the conditions (technological or other) which prevail in similar industrial branches, so as to enforce a degree of uniformity in rewards obtained for similar work. It should be mentioned, however, that following the 1965 economic reform, and the gradual improvement of criteria (worked out by the enterprises themselves) for measuring productivity, and also the growing use of indirect policy measures by the Government, these interventions by the local governments (and, consequently, also the indicators described) have tended to lose some of their earlier importance.

[20] The Yugoslav system does not provide for an automatic adjustment of wages for rises in the cost of living (i.e. a sliding scale).

The way in which the total wage bill is distributed among the individuals is entirely in the hands of the working collective. The latter sets its own rules and methods according to the specific conditions of the enterprise. As shown in an illustrative way in Table 12.6, a number of points is assigned to each of the various criteria selected for the evaluation of the individual performance (e.g. professional skill, degree of responsibility, efforts — increasingly measured by piece-rates[22] — educational background, etc.).[23] The selection of such criteria, as well as the assignment of the relative weights, created a number of difficulties in the early stages of application of the new system, some of which have not yet been fully overcome; a lot of time has to be wasted in drawn-out discussions, in comparing experiences of similar enterprises etc., and it is obvious that the compromises reached could rarely satisfy each member of the collective. However, slowly and gradually the enterprises succeeded in creating a remuneration system much closer to the realities than that which had been imposed by the administrative authorities. The number of points accumulated by a worker or employee represents his claim on a certain share of the wage bill. The size of this share, however, depends on the financial results of the enterprise, with special regard to the contribution made by the organizational unit to which the individual worker belongs. In other words, the system represents the most comprehensive attempt made so far in Yugoslavia to link the wage levels with the overall results of the enterprise, on the one hand, and with the individual performance, on the other. This also seems to explain to some extent the insistence of the political leaders on abandoning the term "wages" and replacing it with that of "personal income of the workers", as the latter may be taken as a better indication of the links established between the workers' earnings and the income of the enterprise.

It is too early to attempt an assessment of a remuneration system which has only been in operation for a couple of years and which, besides, may well be further refined in the light of the experience gained. Nevertheless, the Yugoslav authorities can rightly claim that they have been able to devise a new approach to the problem of labour relations in general. With the actual role of the workers' council in the enterprise's affairs, and especially in the allocation of income, the framework formed by the Government's economic policies represents virtually the only constraint, and the workers and employees have come to assume complete responsibility for the success of the enterprise. If the results are favourable, they will be entitled to a full share in the fruit of their common effort; if results are less satisfactory, little blame can be put on anything but their own behaviour and policies. The potential contribution of such a system to social and political stability is obvious; but, on the other hand, the

TABLE 12.6

Example of points assessment in a Zagreb factory in 1963

	Level of education	Skill and experience	Authority	Responsibility	Physical effort	Mental effort	Working conditions	Total
Managing director	100	170	150	190	10	100	10	730
Technical director	100	140	140	160	10	90	10	650
Works manager	100	130	100	120	10	90	30	580
Foreman	80	60	40	50	10	40	40	320
Skilled weaver	50	40		40	35	30	40	235
Skilled spinner	30	20		20	30	10	40	150
Sales manager	100	130	100	140	10	90	10	580
Accountant	100	100	50	90	10	80	10	440
Truck driver	80	60		70	30	40	40	320
Charwoman	20	10		10	40	10	40	130

Source: R. Bicanic, "Workers' incomes policy in Yugoslavia", *Economique appliquée*, 1963, No. 4.

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[21] The minimum wage is guaranteed by local governments. However, subsidies from the local government funds are of a temporary character. They must be repaid by the enterprise or — if the enterprise continues to run a deficit — the workers' management may be suspended (and replaced by a management imposed by the local authorities) or the enterprise may be liquidated as inefficient.

[22] In Yugoslavia as in the centrally planned economies, piece-rates may have distortive effects on the wage system unless properly decided by the workers' councils.

[23] The points referred to above are, at first, assigned *ex ante* to each individual post as an evaluation of the abilities required, the responsibilities involved, etc. The number of points received by individual members of the working collective, however, depends on their actual performance computed at the end of a given accounting period (usually at the end of each quarter of the year). In the meantime, the members of the working collective are only entitled to "accounting wages" which represent a certain proportion of the actual wages received in the preceding accounting period.

TABLE 12.7

Wage rates — growth of wages, employment and productivity

	Wage relatives, average wage = 100						Productivity average = 100	Growth of average wages						Growth of employment index						Growth of productivity index					
	1956 [a]		1960		1964		1963	1956 [b]-1960		1960-1964		1956-1964 [c]		1956-1960 [b]		1960-1964		1956-1964 [c]		1956-1960 [b]		1960-1964		1956-1964 [c]	
	Level	Rank	Level	Rank	Level	Rank	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Average total wages (thousand dinars)	11.9	—	20.3	—	36.2	—		171		178		304	9	135		122		164	6	116		113		132	
Agriculture [d]	69		66		77		10	163		207		338	5	146		117		171	3	204*		140*		286*	
Construction [d]	76		75		91		5	167		216		360	3	138		114		158	8	125		139		174	
Transport [d]	..				111		3	..		..		..		129		126		162	7	129		102		132	
Trade and catering [d]	88		90		104		8	174		205		357	4	123		135		167	4	133		107		143	
Education [d]	108		..		120		6	..		..		336	6	..		..		171	3	..		..		..	
Science [d]	130*		..		145			..		..		..		..		..		159		..		..		..	
Culture [d]	119		..		108		9	..		..		275	10	..		..		..		..		..		..	
Health [d]	108		..		117		7	..		..		331	8	..		..		181	2	..		..		..	
Finance and insurance [d]	103		..		134		1	..		..		395	1	..		..		183	1	..		..		..	
Administration [d]	102		..		121		2	..		..		362	2	..		..		92	9	..		..		..	
Industry	92		92		100		4	172		194		332	7	137		120		165	5						
Electricity [e]	104	5	121	3	137	1	5	234	1	219	2	511	1	132	14	109	14	144	15	196	2	146	2	285	2
Coal and coke [e]	112	4	110	7	107	9	15	198	12	188	10	373	13	122	17	92	17	113	17	133	9	132	8	175	8
Oil [e]	112	4	111	6	133	2	1	199	11	232	1	163	2	142	13	124	8	176	12	203	1	151	1	307	1
Ferrous metallurgy [e]	120	1	125	2	121	4	8	209	7	187	11	390	10	147	12	109	14	160	13	175	3	111	16	196	7
Non-ferrous metallurgy [e]	112	4	110	7	117	6	6	198	12	204	4	406	7	128	16	108	15	139	16	151	6	131	9	198	6
Non-metallic minerals [e]	101	8	102	11	94	12	12	202	10	178	13	361	15	185	5	123	9	228	7	129	10	135	6	175	8
Metal-using [e]	113	3	114	4	108	8	10	204	9	183	12	373	13	192	4	125	7	240	6	124	13	119	12	148	14
Shipbuilding [e]	115	2	127	1	126	3	9	221	3	192	7	426	3	152	11	101	16	153	14	116*	14	137	5	168*	9
Electro-engineering [e]	102	7	108	8	106	10	7	213	5	191	8	405	8	246	1	149	2	365	1	152	5	141	3	214	4
Chemicals [e]	103	6	113	5	113	7	3	221	2	192	7	425	4	227	3	142	3	323	2	148	7	134	7	199	5
Construction materials [e]	85	13	82	13	83	15	17	195	13	195	6	381	12	131	15	117	13	153	14	138	8	112	15	155	11
Timber processing [e]	86	12	81	14	81	16	16	189	15	195	6	368	14	166	10	118	12	196	11	114	15	139	4	158	10
Paper [e]	101	9	110	7	108	8	2	219	4	190	9	417	6	170	9	155	1	264	4	159	4	141	3	224	3
Textiles [e]	91	11	88	12	81	16	11	193	14	178	13	344	16	173	8	130	5	225	8	108	16	115	14	124	17
Leather and footwear [e]	101	10	105	10	89	14	13	210	6	163	14	343	17	177	6	137	4	242	5	128	11	118	13	151	13
Rubber [e]	104	5	121	3	102	11	4	243	1	163	14	382	11	228	2	126	6	287	3	103	18	134	7	138	15
Food processing [e]	84	14	88	12	91	13	14	208	8	201	5	418	5	175	7	122	10	214	10	126	12	121	11	152	12
Printing [e]	115	2	106	9	118	5	18	186	16	214	3	398	9	185	5	119	11	220	9	104	17	127	10	131	16
Industry total	100	—	100	—	100	—	—	201	—	194	—	389	—	166	—	120	—	199	—	131	—	128	—	168	—

Sources: National statistics.

[a] 1964 for industrial branches.

[b] 1954-1960 for industrial branches.

[c] 1954-1964 for industrial branches.

[d] In percentage of average.

[e] As percentage of average industry.

role of the central government which is called to shape the various economic policies is likely to become increasingly difficult.

As far as productivity is concerned, the new remuneration system may be expected to be stimulative. The system aims at determining individual remunerations in a very concrete and detailed way, which implies a good knowledge of the technical operations and abilities involved as well as of the circumstances under which the work of each member of the working collective is being exercised. In so far as the selected criteria and their relative weights truly reflect individual contributions, remuneration can indeed be directly related to productivity.[24] And it is also fairly clear that the present system tends to discourage any increase in employment not based on economic grounds.

One of the objections which may be raised against the system is that by its very nature it tends to induce skilled and efficient people to concentrate in better equipped, better located and better managed enterprises, which would lead to a further deterioration of the situation in the less fortunate ones. On the other hand, it could also be argued that such a tendency would act as an inducement to the latter to improve their technical and organizational levels in order to become more attractive to the skilled worker. However, the issue does not appear to worry the Yugoslav authorities, at least not at this stage. With the emphasis laid on efficiency, the Yugoslav leaders and most of the professional economists would, in fact, welcome a system which tends to stimulate mergers and/or looser forms of industrial integration.

Attention should be drawn, however, to two important questions which are touched upon in one of the subsequent sections: the first concerns the possible implications of the principle that a rise in productivity should invariably be followed by a corresponding rise of wages in order to maintain market stability; the second question relates to the inherent conflict between the tendency of the Yugoslav system to individualize wage levels and the need for a relatively defined pattern of wages according to sectors and branches of industry.

Wage differentials by sectors and branches of industry

As is to be expected, the gradual evolution of the Yugoslav system of remuneration, starting from the highly centralized and equalitarian model of the early postwar years, could not have rapidly resulted in significant wage differentials. However, it is nevertheless true that the various economic reforms since 1952 have constantly tended to make wage levels increasingly differentiated by sectors and branches of economic activity.

The standard deviation of sectoral wage levels given in Table 12.7 increased from 19 percentage points in 1956 to 23 points in 1964. Over a longer period of time, changes in the standard deviation would have been more pronounced, but the lack of comparable data limits the analysis to the period beginning in 1956. A somewhat longer span can be used only for the analysis of wage differentials within industry. The standard deviation of wage levels in this particular sector rose from 11 percentage points in 1954 to 15 percentage points in 1960, and to 18 percentage points in 1964.

The rank correlation between the variations in the growth indices of wage levels and the variations in the growth indices of productivity levels by industrial branches for the 1954-1964 period gives a coefficient of 0.69. If, however, the period is split into two parts, the coefficient for the years following 1960 is considerably higher than the one obtained for the earlier part of the period (0.66 and 0.39 respectively). The latter exercise clearly indicates a growing association between the growth of wages and the growth of productivity over the period, especially after 1959 when major departures from the traditional wage system were made. It may be said, therefore, that the increase in wage differentials between 1952 and 1964 reflected improved links between wages and productivity and/or greater differentiation of productivity levels among individual branches.

The growth of wages not attributable to the growth of productivity was due to various factors among which changes in prices and employment were particularly important. Prices were moving up and rather unevenly, and given the power of workers' councils these price increases affected wages. For this reason wages in nominal terms rose much faster than those in real terms while the gap between the two magnitudes tended to vary from one branch to another. Moreover, some industries, especially the older ones, which, as a rule, are less adequately equipped, were often obliged to raise wages faster than provided for by the growth of productivity in order to retain their skilled labour. However, it is clear that the

TABLE 12.8

Wages in industry by education and skill

Wages of unskilled workers = 100

	1951	1952	1954	1957	1959	1961
Education — employees						
University	125	156	238	290	316	333
Secondary school			155	170	186	190
Elementary school	101	100	123	119	132	135
Skill — workers						
Highly skilled	120	144	205	223	243	249
Skilled			146	149	159	160
Semi-skilled	105	110	118	117	125	124
Couriers and messengers	101	100	107	107	106	105

Sources: National statistics; and Ekonomski Institut FNRJ, *Privreda FNRJ u 1952.*

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[24] Although statistical information on the growth of productivity cannot be taken as conclusive proof of the stimulative effects of the new system, it is nevertheless worth mentioning that the average annual growth of productivity in the economy (agriculture excluded) from 1962 to 1965 amounted to 6.6 per cent, and to 7.3 per cent in the first 8 months of 1966 (the corresponding period of 1965=100), against 3.8 per cent during the 1959-1961 period.

relatively modest correlation between the growth of wages and the growth of productivity in the period reflected to a very considerable extent the Government's rather tight control over wage differentials prior to 1961.

The lack of correlation between the growth of wages and the growth of employment seems to be attributable, among other things, to a situation which was characterized by a high share of centrally allocated investment resources and by a lack of labour mobility. Important regional differences in the way of life and customs, combined with the possibility of finding employment and an apartment "on the spot", has tended to limit labour migration mainly to highly-skilled and professional workers, although, as already explained, such a tendency has also been partly counteracted by the endeavour of the enterprises to retain their skilled labour through more

TABLE 12.9

Regional differentials in industrial wages

(Workers and employees combined)

Yugoslav average = 100

	1954	1956	1962	1964
Bosnia and Hercegovina . . .	93	95	97	99
Croatia	100	104	103	102
Montenegro	92	95	91	90
Macedonia	83	85	80	85
Serbia	98	96	89	91
Slovenia	113	110	128	127

Sources: National statistics.

TABLE 12.10

Wage differentials by occupation (actual earnings), 1963

	Average wages in thousand dinars	Wage rates, overall average=100	Wage rates, average of each group=100
Total	28.6	100	—
1. Agriculture and fisheries	22.0	77	100
2. Miners	29.3	102	100
3. Industrial workers	27.1	95	100
Foundry workers	31.0	108	114
Metal-cutters	32.2	113	119
Precision mechanics	34.2	120	126
Electricians	32.5	114	120
Construction workers	22.9	80	85
Textile producers	20.6	72	76
Chemicals workers	30.1	105	111
Workers in food processing	24.0	84	89
Printing workers	32.4	113	120
4. Transport workers	32.3	113	100
Officers in merchant navy and pilots	50.1	175	155
Sailors	32.2	116	103
Drivers	35.4	124	110
Postmen	24.6	86	76
5. Trade workers	30.4	106	100
Retail trade managers	43.8	153	144
Shop assistants	26.3	92	87
6. Executives	60.5	211	100
Chief administrators	73.0	255	121
Directors of departments	47.6	166	79
Heads of establishments	55.7	195	92
Directors of enterprises	68.3	239	113
Technical directors	68.2	238	113
Commercial directors	60.2	210	100
7. Experts and artists	41.8	146	100
Physicists, chemists, mathematicians	55.7	195	133
Engineers	62.0	217	148
Technicians	45.3	158	108
Biologists, veterinarians, agronomists	52.1	182	125
Doctors, chemists	67.6	236	162
Economists, statisticians	37.7	132	90
Secondary school teachers	40.4	141	97
Artists	53.7	188	128

Sources: National statistics.

attractive wages. However, the labour market has been becoming increasingly flexible so that the degree of correlation between wages and employment has tended to rise.

Wage differentials by skills

Table 12.8 is particularly indicative of the important departures from the early equalitarian policies made since 1952, although the period covered does not extend beyond 1961. As can be seen, the wage increases between 1951 and 1961 were far from proportional, as it was the highly skilled workers and the employees with a university background who benefited most. In addition, there was a tendency for salaries of university graduates to increase faster than those of other technical or managerial staff and of skilled workers. The differentials from one year to another were significant, especially if the years of reference are selected so as to coincide with the years of economic reform. The difference in wages between employees with elementary school education and worker-couriers and messengers is explained by the fact that the former have full elementary school education and often an additional course in some subject, whereas a considerable number of the latter do not even have full elementary school education.

Wage differentials by regions

As shown in Table 12.9, the regional disparities in industrial wages between 1954 and 1964 also tended to become more pronounced, although the changes in wage differentials in shorter intervals were not always in the same direction. The standard deviation between 1954 and 1958 fell from 10 percentage points to 8 percentage points; in 1962 it went up to 15 per cent and then declined slightly in the following year.

Regional wage disparities and their subsequent changes cannot be explained in terms of any single factor, but are partly attributable to differences in local conditions and practices. There is virtually no correlation between the changes in wage differentials and changes in productivity. It would seem, on the other hand, that the price distortions and the multiple exchange rates during the period were an important factor affecting wage disparities and the tendency of the latter to increase. For, despite the rather complex effects that price disparities and multiple exchange rates exerted on the economy, they generally tended to favour manufacturing industries concentrated in the northern and western regions, while putting the primary producers in the southern and eastern parts of the country in a disadvantageous position. It may also be said that the changes in the assortment and quality of production not directly related to increases in productivity (though favourable to profitability) in the manufacturing sector contributed to the widening of the regional disparities. Moreover, in order to strengthen the local development efforts, the enterprises in the less developed southern and eastern regions usually had no other alternative than to keep wages at lower levels than those obtained in the more prosperous parts of the country.

The decline in the standard deviation of regional wage differentials observed between 1962 and 1963 was most probably due to the partial price reform conducted in the latter year. It is also reasonable to assume that the more radical changes in the structure of relative prices in 1964, and especially in 1965, must have further reduced the regional wage disparities, which will now tend to be more positively correlated with the regional levels of productivity.

Wage differentials by occupations

The data on wage differentials by occupations, available for 1963 only, are given in Table 12.10. The figures contained in the table do not require any particular comment, but it may be added that, as in the case of wage differentials by skills, there has been a tendency for a faster rise of wages accruing to people who exercise more complicated and/or more responsible jobs. Moreover, wages for virtually the same kind of occupation tend to vary to quite a considerable extent from industry to industry, and also from enterprise to enterprise within the same branch. The variations in question partly reflect the different levels of productivity of individual enterprises, but partly also the regional disparities which, as already stated, cannot be satisfactorily explained by differences in productivity alone.

Dispersion of wage-earnings

Scattered information indicates that the dispersion of wage receipts, which had been very small prior to 1952, tended to increase in later years. The wider range of the basic wage scales of the enterprises, and the change in the distribution of workers among the various grades, must have favoured dispersion. The remuneration rules tended to rest increasingly on the appraisal of individual effort through the application of piece-rates rather than

TABLE 12.11

Distribution of employment in the economy by size of average monthly earnings

Wage- and salary-earners, total

September

	1962	1963	1964
Up to 10,000 dinars	3.8	1.9	..
10,001-15,000	16.2	9.6	..
15,001-20,000	25.1	20.7	11.5
20,001-25,000	20.0	20.2	16.0
25,001-30,000	13.7	15.7	16.6
30,001-40,000	12.7	17.2	23.3
40,001-50,000	5.0	7.8	13.1
50,001-60,000	2.0	3.6	7.0
60,001-80,000	1.2	2.4	5.5
80,001-100,000	0.2	0.6	1.7
Over 100,000 dinars	0.1	0.3	1.1

Sources: National statistics.

time-rates with the result that the range of wage-earnings widened. The increase in wage differentials by sectors and branches as well as by regions worked, of course, in the same direction. The tax on wages did not have any effect in this respect because it has always been a straight non-graduated payroll tax. However, there are indications that the dispersion of wage-earnings tended to diminish somewhat in 1963 and 1964, following the rise in minimum guaranteed wages, which in a number of cases are regarded as uneconomically high.

Due to the lack of data the dispersion of wage-earnings cannot be worked out in a truly dynamic way (see Table 12.11). In line with the wage policies and the various kinds of wage differentials, the concentration around a central tendency was not very marked. In 1962 the median amounted to 21,225 dinars with the first quartile amounting to 16,000 dinars; the corresponding figures in 1964 were 30,500 and 22,900 dinars. These figures indicate a large degree of asymmetry in the distribution of workers and employees by wage-earnings.

12.4. Family Income

The family income may be said to reflect all the various effects of incomes policies so that it provides an extremely important element for the analysis of the final income and consumption of the population. The family represents the basic consuming unit; the level and pattern of consumption, therefore, are influenced much more by family incomes than by incomes of individuals. Moreover, the redistributive effects of the social benefits and collective consumption are most strongly felt at the family level.

Family income is shown in accordance with the Yugoslav definition. It includes gross borrowing, gross decrease in savings and net hire-purchase credits. Moreover, these figures are compiled through the summation of families who draw on these funds, i.e. it is not netted. On the expenditure side, there may be a difference, because repayments and savings are shown on a gross basis.[25]

As already explained in an earlier chapter of this study, family income can be regarded as a function of the level and differentiation of wages, the size and composition of the family, its activity rate, and, finally, the degree of income redistribution carried out by social benefits and taxation policies.

In Yugoslavia three broad types of households are distinguished: those of workers and employees in the socialist sector, farm households and mixed households. The definition of the first two types is clear, while the third type consists of families possessing a farm and having one or more of its members permanently employed outside the household, engaged in a private business (handicraft, free professions, etc.), or receiving a pension. The number of these households has been on the increase and they now account for almost one-third of all households not purely agricultural. They possess almost one-third of the arable land in the country.

The data concerning workers' and employees' households contained in Table 12.12 show that the bulk of family income in Yugoslavia is accounted for by income from regular employment, which is a function of the average wage and the number of employed. The table also indicates that there is a tendency for income from regular employment to account for a rather constant share of family income. As a result, it appears as though most differences in family income are explained by variations in income derived from regular employment and the volume of employment. In fact, three indices coincide: the family income of the highest income group amounts to 853 (the family income of the lowest income group = 100), the index of income derived from regular employment per employed for this group is 379 and that of the volume of employment 225. The product of the last two indices is 853. This is in part the problem of classification. If the income per member rather than total income were specified, then the varying impact of social benefits related to the size of families and per capita income would show up.

Income derived from part-time jobs tends to gain in relative importance in the lowest income groups, reflecting the efforts of the less well-to-do families to increase total earnings by additional occupations. While this type of income tends, as a rule, to mitigate income disparities somewhat, this cannot be said for property income. As can be seen from the table, income from property plays a very minor role, but, with the exception of the very lowest group, its share tends to increase in family incomes of the higher groups. On the other hand, except again in the lowest income group, hire-purchase credits appear to supplement rather proportionately the total cash income of the different groups.

The size of the family affects the combined income, first, through the size of the accruing social benefits (amounting on average for all families to 11 per cent of the total cash income) and, secondly, through the number of family members employed, which tends to rise with the size of the family.

In fact, the figures in the table indicate an increase in the size of households with the increase in income level up to the 800-899 class. However, at the higher level of income no such relationship exists. Thus, for all classes taken together, correlation between the size of households and income level is very weak.

The role played by taxation is rather limited. The tax incidence varies from 0.4 per cent in the lowest income range to about 1-2 per cent in the highest range. The low incidence of taxation is explained by the fact that the wage tax is a payroll tax, deducted at the factory or ministry level, so that additional taxes only concern income from non-regular employment which exceeds 800,000 dinars per year (when it is levied at a progressive rate) and property income. This tax is levied on individuals and not on households.

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[25] This explains the differences between Tables 12.12 and 12.13 (which show dissaving on the income side) and Table 12.16 (which shows savings on the expenditure side).

Income differentials have tended to widen since 1957. In that year the ratio between the lowest and the highest income group was 1:5.2 per family and 1:3.1 per family member; the corresponding figures for 1963 were 1:8.5 and 1:4.7. There was, therefore, a parallelism in the movement of wage differentials and that of family income differentials.

The combined income of farm households is shown in Table 12.13. The data contained in the table clearly indicate that, on the average, the single largest share of the family income is still accounted for by income in kind. A considerable proportion of the cash income is derived from part-time employment (17 per cent on the average, but ranging from 9 per cent to 27 per cent from the highest to the lowest income groups) outside agriculture.[26]

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[26] This is an important equalizing factor. The variations in the ratios of income derived from part-time employment are not due to the variations in family size (in fact the variation is reversed) but rather to the variations in the size of farms (or finally the level of family income). Families in higher income brackets are larger, but due to the larger size of their farms, their members are employed on their own farms. Small size of farms forces the members of respective families to look for jobs outside. Moreover, unfavourable agricultural prices often oblige the latter to look for part-time jobs in order to supplement their small income derived from farming. In a way this tended to divert attention from agriculture, with adverse effects on productivity.

TABLE 12.12

Households of workers and employees in 1963

	Total thousand dinars	Up to 199	200-299	300-399	400-499	500-599	600-699	700-799	800-899	900 and over
	Source of household income									
Total income per household - thousand dinars	714	159	279	384	492	601	706	818	927	1 357
Percentage of total :										
Cash income	90.1	94.5	90.9	89.4	89.0	89.2	89.3	89.2	89.9	91.4
of which :										
Regular employment	79.0	76.2	80.4	77.0	78.7	79.2	79.0	78.9	82.1	78.7
Part-time jobs	3.2	6.9	3.4	3.8	3.2	3.2	3.6	3.6	3.1	2.8
Social insurance	10.7	11.1	13.4	15.3	14.0	13.3	11.6	10.6	9.3	7.6
Lease and selling of property	2.7	1.7	0.9	1.3	1.6	1.4	2.3	2.5	2.5	4.2
Income from property	0.3	2.7	0.3	0.2	0.1	0.0	0.0	0.1	0.5	0.7
Lottery and presents	1.1	0.3	0.6	1.0	1.1	0.7	1.2	1.0	0.9	1.5
Borrowing (gross)	0.9	0.5	0.4	0.8	0.6	0.8	1.0	1.1	0.5	1.1
Decrease in savings (gross)	2.0	0.7	0.6	0.7	0.7	1.4	1.3	2.2	1.1	3.4
Income in kind	1.7	1.6	1.3	1.9	2.4	2.3	2.3	2.1	1.3	1.1
Hire-purchase credit (net)	8.2	3.8	7.8	8.7	8.6	8.5	8.4	8.7	8.8	7.5
	Size and activity rate of households									
Members per household	3.6	2.2	2.7	3.3	3.5	3.8	3.8	4.0	3.8	4.0
Number of consuming units	2.9	1.8	2.1	2.6	2.8	3.0	3.0	3.2	3.2	3.2
Number of children	1.5	0.6	1.1	1.5	1.6	1.7	1.6	1.7	1.5	1.5
Number of employed	1.3	0.8	1.0	1.0	1.1	1.3	1.4	1.4	1.6	1.8
	Percentage distribution of household members									
Employed	36	36	37	30	31	34	37	35	42	45
Children	42	27	41	45	46	45	42	43	40	38
Others	22	37	22	25	23	21	21	22	18	17
	Income per consuming unit and per employed									
Per consuming unit — *thousand dinars*	246	88	133	148	176	200	235	256	299	424
Per employed — all income included — *thousand dinars*	549	198	279	384	447	462	504	584	579	754
Per employed — income from regular employment — *thousand dinars*	391	143	204	261	313	327	356	411	428	542
Per employed — regular and part-time employment included — *thousand dinars*	407	179	273	274	325	340	372	430	443	561
	In relation to the average									
Total income per family	100	22	39	54	69	84	99	115	130	190
Income per consuming unit	100	36	54	60	72	81	96	104	122	172
Income per employed	100	36	51	70	81	84	92	106	105	137
Income from regular work per employed	100	36	52	67	80	84	91	105	109	139
Income from regular and part-time work per employed	100	44	52	67	80	84	91	106	109	138
The size of family	100	61	75	92	97	106	106	111	116	111
Activity rate	100	100	103	83	86	94	103	97	117	125
Number of employed	100	62	77	77	85	100	108	108	123	139

Sources: National statistics.

TABLE 12.13

Farm households in 1963

	Total thousand dinars	Up to 199	200-299	300-399	400-499	500-599	600-699	700-799	800-899	900 and over
Total income per household — thousand dinars	419	135	251	348	446	547	648	748	847	1 188
Percentage of total :										
Cash income	45.4	49.4	43.8	43.1	42.9	41.9	44.9	45.5	46.9	53.3
of which :										
Regular employment	0.5	0.3	0.7	0.7	0.6	0.2	0.2	0.3	0.6	0.8
Part-time jobs	17.4	26.8	27.0	22.7	18.1	18.1	15.2	9.2	11.2	9.0
Social insurance	2.8	5.8	4.7	3.1	3.3	2.6	2.2	1.0	2.1	1.3
Property and work	62.6	51.0	54.5	58.9	63.6	62.5	68.2	75.5	68.7	62.8
Decrease in savings	8.1	4.9	4.4	7.5	6.7	9.2	6.9	7.3	7.5	14.2
Income in kind	54.5	50.6	56.2	56.8	57.1	58.1	55.1	54.3	53.0	46.6
	Size and activity rate of households									
Family members — *numbers*	4.5	2.6	3.8	4.4	5.1	5.4	5.7	6.1	6.5	7.2
Consuming units — *numbers*	4.0	2.3	3.3	3.9	4.5	4.8	5.1	5.3	5.7	6.3
Children — *numbers*	1.5	0.8	1.5	1.6	1.8	1.9	2.0	1.8	2.1	2.1
Other than children — *numbers*	3.0	1.8	2.3	2.8	3.3	3.5	3.7	4.9	4.4	5.1
	Distribution of household members — as percentage of total									
Children	33	31	39	36	35	35	35	30	32	29
All others	67	69	61	64	65	65	65	70	68	71
	Income per member per consuming unit and per other than children									
Per member — *thousand dinars*	93	52	66	79	87	101	114	123	130	165
Per other than the children — *thousand dinars*	140	75	109	124	135	156	175	174	207	233
Per consuming unit — *thousand dinars*	105	59	76	89	99	114	127	141	149	188
	In relation to the average									
Total income per family	100	32	60	83	106	131	155	179	202	284
Income per member	100	56	71	85	94	109	123	132	140	177
Income per consuming unit	100	56	72	85	94	109	121	134	142	179
Income per member other than children	100	54	78	89	96	111	125	124	148	166
Income from property	100	48	65	80	93	103	135	130	155	195
Income from part-time employment	100	91	118	109	136	109	109	55	91	100
Family members	100	58	84	98	113	120	127	136	144	160

Sources: National statistics.

Among cash items, by far the most important contribution is made by income derived from work on the farm. The proportion of the latter first tends to rise going up the income group ladder but it declines in the two highest groups. This income, together with income in kind (which, of course, also comes from the farm), accounts for the bulk of the total family income, and also there is a high correlation between their respective variations in size. On the other hand, income from work on the farm tends to vary very closely with the variations in the size of farms and the size of families so that there is also a high degree of association between the variations in these two factors and those in the total family income, which, of course, is only natural. Better techniques can be applied on larger farms and, as a rule, larger families can save more on hired labour.

Social benefits and taxation tend to reduce somewhat the differences between the various income groups — the proportion of the former tending to decrease in the higher brackets and that of the latter going in the opposite direction. The tax is levied on cadastral income and amounts to close to 12 per cent of the average farm income.

A few words should be added about the so-called mixed households, the members of which are split into those engaged on the farm and those employed outside agriculture. The cash income of such households amounts on the average to 64 per cent of their total income. Out of this proportion 59 per cent is derived from regular non-agricultural employment, 17 per cent from work on the farm, 15 per cent from social benefits, 4 per cent from part-time jobs and 5 per cent from other factors. These households largely consist of unskilled workers who, by drawing income from both agriculture and the non-agricultural sectors (mainly industry), usually do not perform satisfactorily in either. Increasing efforts have been made of late either completely to detach such families from the land or to make them concentrate on farm work.

A comparative analysis of incomes of different households

Table 12.14 provides basic indicators concerning income of different types of households and income differentials within the latter. Income per consuming unit has been selected as the basis for comparison.

The table shows a great deal of variation between the incomes of different types of household as measured by the average income per consuming unit. Medians show similar results. However, there is a certain regularity in the variations observed: income per consuming unit rises along with the type of household, from purely agricultural to mixed households and to households having no connexion with agricultural output (non-agricultural).

Moreover, there is also a great deal of variation in the degree of inequality in income distribution within different types of households as measured by the Lorenz coefficients and/or the position of the extreme groups. These variations seem to reflect, *inter alia*, the differences in the degree of homogeneity of the groups. For instance, the agricultural and mixed households, which are more homogeneous than the non-agricultural ones, show smaller Lorenz coefficients than the non-agricultural households.[27] Or, all households combined have the largest Lorenz coefficient because they are most heterogeneous.

The picture of income distribution by different types of households is more complete if the position of extreme groups is analysed.

The average 5 per cent of consumer units to be found at the bottom of the income ladder is composed of 85 per cent of consumer units from agricultural households, 5 per cent of consumer units from mixed households and 10 per cent of consumer units from non-agricultural households. In other words, in the average 5 per cent of consumer units at the bottom of the income ladder are to be found 14 per cent of all units in agricultural households, 0.8 per cent of units in mixed households and 1.4 per cent of units in non-agricultural households: the corresponding figures for the bottom 10 per cent are 24.6, 5.5 and 2.2 per cent respectively. In contrast, the average 5 per cent of consumer units to be found at the top of the income ladder are composed of 87 per cent of consumer units from non-agricultural households, and 11 and 2 per cent of consumer units from mixed and agricultural households respectively. This, in fact, means that 12 per cent of consumer units in non-agricultural households, 1.6 in mixed and 0.38 in agricultural households fall in the average top 5 per cent of consumer units: the corresponding figures for the top 10 per cent are 22.2, 5.1 and 0.8 per cent respectively. There is also a great variation in the distribution of consumer units below any fixed amount of income.

The cumulative distribution of income

Table 12.15 provides information concerning the distribution of consumer units and employment and the proportion of income earned, as well as earnings of individual groups in proportion to the median. An interesting conclusion that may be drawn from this table is that the differentiation in family incomes (measured per consuming unit) is larger than the differential in wage income (measured per employed). Partly this is the result of different periodization since family income refers to 1963 and wage income to 1964, when minimal wages were raised, thereby tending to narrow the spread of earnings. The coverage is also different: family income referring to all types of households, while wage income excludes farm earnings. However, the differentials in income distribution would be lower if collective consumption were taken into account since it is more evenly spread over all groups.

TABLE 12.14

Some comparative data concerning income of different types of households, 1963

	Agricultural	Mixed	Non-agricultural	Workers alone	All households
The distribution of consuming units	30.38	33.34	36.28	26.61	100.00
Average income per consuming unit *(thousand dinars)*	105.4	144.5	222.3	230.2	160.8
Median *(thousand dinars)*	86.7	131.7	184.1	186.5	130.8
Lorenz coefficient	0.26884	0.23735	0.30385	0.29769	0.32377
Composition *(in percentages)* of the average 5 per cent of consumers' units to be found at the bottom of the income ladder	85	5	10	..	100
Composition *(in percentages)* of the average 10 per cent of consumers' units to be found at the bottom of the income ladder	74	18	8	..	100
Composition *(in percentages)* of the average 5 per cent of consumers' units to be found at the top of the income ladder	2	11	87	..	100
Composition *(in percentages)* of the average 10 per cent of consumers' units to be found at the top of the income ladder	2	17	81	..	100
Percentage of consumers' units with annual income below 50,000 dinars	10.8	0.74	1.34	0.76	4.01
Percentage of consumers' units with annual income below 100,000 dinars	59.7	29.4	16.4	12.9	33.9

Sources: National statistics; L. Madzar, "Raspodela dohotka u svetlu najnovijch podataka ", *Ekonomski Pregled*, year XV, No. 11-12/1964, pp. 766-769.

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[27] As an example, non-agricultural households contain a spectrum of households starting from those of unskilled workers to, for instance, those of university professors, while agricultural households include only the farming population.

TABLE 12.15

Distribution of deciles (consumer units and employment), proportion of cumulative income and earnings expressed as percentage of the median of the given distribution

Consumer units and employment	Distribution of income per consumer unit in 1963		Distribution of earners by size of wages — July 1964	
	Cumulative percentage of income	Income earned in proportion to median	Cumulative percentage of wages	Wages earned in proportion to median
Top 1 per cent	95.70	4.01	—	—
Top 3 per cent	89.71	3.10	91.4	2.64
Top 5 per cent	84.80	2.78	87.5	2.29
Top decile	74.65	2.31	78.0	1.90
II decile	58.14	1.71	63.3	1.49
III decile	45.78	1.40	51.4	1.28
IV decile	35.19	1.17	41.0	1.12
V decile	26.83	1.00	31.8	1.00
VI decile	19.53	0.84	23.3	0.87
VII decile	13.20	0.71	16.1	0.78
VIII decile	7.86	0.62	9.6	0.68
IX decile	3.25	0.50	4.2	0.57

Sources: National statistics; B. Šefer, *Životni standard i privredni razvoj Jugoslavije*, elgrade, November 1964 (published by the Federal Bureau of Planning—studies 18), p. 255; L. Madžar, "Raspodela dohotka u svetlu najnovijih podataka ", *Ekonomski Pregled*, year XV, No. 11-12/1964, p. 764.

12.5. INCOME AND PERSONAL CONSUMPTION

The pattern of expenditure of the population for three elected years is given in Table 12.16. As can be seen, he combined share of expenditure on goods and services nd consumption in kind in total disposable income was ower in 1961 than in 1952, while the proportion of avings and taxes gained in importance. The share of ash purchases of goods and services alone rose somewhat, vhereas that of consumption in kind registered a significant decline.

TABLE 12.16

Expenditures of population (including non-productive services)

	1952	1956	1961	1952	1961
	Billion dinars			Shares	
otal expenditures [a]	551	926	2 014	100.0	100.0
f which :					
Purchase of goods and productive services	360	615	1 385	65.3	68.8
Consumption in kind	163	249	370	29.6	18.4
Purchase of non-productive services	18	34	80	3.3	4.0
Tax and other levies	5	13	73	0.9	3.6
Savings	5	15	106	0.9	5.2
of which :					
Savings deposits	1	5	31		
Cash	2	7	53		
Investments in fixed capital	2	3	22		

Sources: National statistics. [a] Equal to disposable income plus tax.

Tables 12.17 and 12.18 show the pattern of expenditure on goods and productive services for selected years and the corresponding elasticities relative to income and prices. The data in Table 12.17 indicate the familiar trends of changes in consumer demand relative to the growth of income: a declining trend for the share of food; relative stability in the proportion of expenditure on the traditional consumer manufactures; and a rising share of expenditure on durable consumer goods, particularly vehicles. The same trends are expressed by the elasticity coefficients in Table 12.18.

The changes in the pattern of expenditure over time (and also in the elasticity coefficients) are somewhat different if expressed in constant instead of in current prices. Computation in constant prices (Table 12.17), supplemented by the data on changes in relative prices, contained in Table 12.19, can show more clearly the impact on the demand pattern of the changes in income and prices.

The effects of changes in prices cannot always be assessed with complete accuracy and, besides, in the period under review, they played a considerably less important role than changes in income. It is true, for instance, that the gradual increase in food prices in relation to the prices of industrial products tended to affect adversely the consumption of food, but at the same time the demand for food was influenced by other factors, some of which operated in the opposite direction. The average level of food consumption in Yugoslavia had been low in the early postwar years and it was still rather low at the beginning of the period under consideration. The improvements in supplies and in the quality

TABLE 12.17

Structure and change of total consumption (including non-productive services)

Percentage shares, index numbers and elasticity coefficients

Time series

	Current prices					Constant 1953 prices				Family budgets
	Structure		Index 1953 = 100		Elasticity coefficient 1953-1963	Structure	Index 1953 = 100		Elasticity coefficient 1953-1963	Structure in 1963
	1953	1963	1956	1963		1963	1956	1963		
Total consumption (or expenditure)	100.0	100.0	145	398	1.0	100.0	117	223	1.0	100.0
of which :										
Food	48.9	40.8	143	332	0.78	36.3	110	116	0.54	47.9
Beverages	7.0	4.9	119	281	0.61	4.4	102	142	0.34	3.9
Tobacco	3.9	3.4	138	350	0.84	3.0	104	171	0.58	3.0
Clothing	13.8	14.3	144	414	1.05	21.0	142	340	1.95	10.6
Footwear	4.0	3.7	136	364	0.90	4.1	116	224	1.01	
Durable goods	6.0	9.2	157	614	1.72	11.8	135	441	2.77	8.3
Current expenditure	1.2	1.1	157	386	0.96	1.2	129	243	1.16	..
Heating	2.4	1.8	160	293	0.65	1.3	87	120	0.16	4.8
Light	0.6	0.9	125	550	1.51	1.3	125	450	2.85	
Rent and upkeep	1.3	2.4	150	738	2.14	0.9	88	150	0.41	3.1
Transport	1.7	2.4	155	536	1.46	2.6	127	327	1.84	1.9
Hygiene, health, etc.	4.4	7.2	189	656	1.87	4.3	130	219	0.97	3.3
Vehicles	0.2	1.7	100	2 100	6.71	2.0	50	1 400	10.57	1.7
Holidays, entertainment	3.8	5.6	183	600	1.68	5.2	139	313	1.73	3.4
Other services	0.8	0.6	80	300	0.67	0.6	80	160	0.49	..
All services	10.9	15.9	166	581	1.61	9.8	..	200	0.82	..

Sources : National statistics; B. Šefer, *Životni standard i privredni razvoj Jugoslavije*, p. 153 (issued as No. 18 of a series of mimeographed studies by the Federal Bureau of Planning, Belgrade, November 1964).

NOTE. — Elasticity coefficients are the result of the division of the percentage increase in consumption of the above items by the percentage increase of total consumption.

of food products in the subsequent years tended to stimulate demand and therefore to slow down the effects of the rise of food price relatives. A similar situation also developed in housing where, until very recently, demand failed to react to the gradual increase in rents. In the field of consumer goods, effective demand has been greatly stimulated by the fast rise of hire-purchase credits.[29] Backed by credits, the strong psychological drive for consumer durables in recent years, virtually insensitive to the price levels, may have done more to decrease the share of food in consumer expenditure than the increase in the relative prices of the latter. In addition, the changes in the structure of the population during the period also affected the demand pattern, working generally in the same direction as the changes in income.

The planning of income and consumption and the problem of market equilibrium

With the complete abandonment of the old model of central planning, the income and consumption plans in Yugoslavia have retained an indicative value only. The purpose of these plans is mainly to determine the possible trends of growth of income and consumption and the conditions of market equilibrium. They are needed as guidance for the changes in the volume and structure of output and the allocation of investment resources, but the targets contained are not compulsory. The plan is considered to be implemented if the actual growth of income and consumption in the plan period does not differ substantially from the plan target (the attitude of the authorites in this respect is rather flexible) and if there had been consistency in developments on the demand and the supply sides.

The principal point in the projection of consumers' demand in Yugoslavia is the projection of the future trend of total consumption and of the change in the pattern of consumption. (This projection also includes as one of its elements a plan of the formation and the use of disposable income of the population.) The planning of consumption proceeds in three stages: first, the increase in total consumption is projected; secondly, the breakdown of the total consumption fund on purchases of various groups of commodities and services is made; and thirdly, a balance is drawn between the expected change in consumption (or demand) and the growth of output (or supplies) of commodities and services.

In the first stage, only the global level of consumption is projected. This level is first tentatively fixed as a proportion of national income, which is projected to reach a certain level in a future year. Consumption is then

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[29] In 1960, about 15 per cent of total expenditure on durable consumer goods was financed by hire-purchase credits; the corresponding figure in 1963 had risen to 35 per cent.

TABLE 12.18

Patterns of expenditure and income elasticities of demand relative to one consuming unit — family budgets 1963

	Wage-earners' households				Peasant households			
	Percentage share of expenditure average	Coefficient of elasticities			Percentage share of expenditure average	Coefficient of elasticities		
		I	II	III		I	II	III
Lodging	3.9	0.64	0.69	0.68	1.6	1.34	1.56	2.12
Light and heating	3.9	0.44	0.42	0.38	5.6	..	..	..
Furniture and household equipment and corresponding services	10.2	3.59	3.44	3.27	2.5	2.91	4.50	4.71
Consumer durables	2.7	3.03	5.00	5.53	0.7	..	..	..
Furniture	2.6	14.4	11.67	9.43	0.6	15.02	27.21	24.70
Clothing	7.2	0.99	1.15	1.00	5.2	2.54	3.00	2.48
Footwear	2.5	1.02	1.01	0.87	1.8	1.55	1.82	1.47
Vehicles and corresponding services	2.1	13.40	20.43	46.35	0.6	..	..	..
Transport services	1.4	0.91	0.96	0.87	0.8	1.34	1.48	1.14
Hygiene and health	3.0	0.69	0.73	0.74	3.7	0.98	1.04	0.87
Holidays	0.7	3.93	4.38	4.85	—	—	—	—
Education	2.4	4.49	3.93	3.89	1.0	3.58	3.06	2.74
Entertainment	0.7	1.26	1.42	1.26	0.2	..	..	..
Tobacco	2.9	0.44	0.41	0.33	2.3	0.34	0.28	0.19
Food	35.2	0.65	0.60	0.51	67.6	..	..	..
Bread	4.0	0.31	0.21	0.16				
Vegetables	3.2	0.46	0.38	0.29				
Fruit	2.4	1.35	1.41	1.16				
Meat and meat products	7.3	1.48	1.51	1.23				
Fats	3.0	0.70	0.50	0.32				
Milk and milk products	0.1	1.79	1.61	1.29				
Sugar	1.2	0.90	0.54	0.45				
Eggs	0.9	1.89	1.92	1.83				
Meals in restaurants	4.1	0.25	0.39	0.53				
Drink	2.3	1.43	1.32	1.12	1.1	1.25	1.48	10.2
Building and house maintenance	3.7	4.60	4.83	8.49	2.0	0.99	0.79	4.22
Savings	4.3	0.84	1.32	1.75	2.6	1.67	2.11	3.51

Sources: National statistics.

NOTE. — Coefficients are the result of the division of the percentage increase inconsumption of every item by the increase in income.

I covers the 500-599 thousand dinar income group, II the 800-899 group, and III the 900 and over group. See Tables 12.12 and 12.13.

TABLE 12.19

Index of change in relative (retail) prices 1956-1963 period

	Index of prices 1963 (1953 = 100)	Index of change in relative prices 1953 to 1963 (index of average retail prices = 100)	Index of prices 1963 (1953 = 100)	Index of change in relative prices 1959 to 1963 (index of average retail prices = 100)
Food	199.4	110.8	148.5	107.7
Tobacco and beverages	181.2	100.7	124.1	90.0
Clothing and footwear	111.6	62.0	111.4	80.0
Rent	276.9	153.9	183.4	133.0
Household equipment	121.5	67.5	111.4	80.8
Hygiene	179.2	99.6	140.6	102.0
Culture, holidays, entertainment	182.5	101.4	130.8	94.9
Transport and telecommunications	154.0	85.6	116.7	84.6
Total	179.9	100.0	137.9	100.0

Sources: National statistics; B. Šefer, *Životni standard i privredni razvoj Jugoslavije*, Belgrade, November 1964 (published by the Federal Bureau of Planning — tudies 18), p. 155.

worked out in a more precise way with the help of the projection of disposable income.[30]

The second stage in the projection of consumption consists of the disaggregation of the total consumption fund on purchases of the products of different sectors and branches of industry. This, in fact, represents the working out of the major components of final demand, with the help of which necessary supplies can be calculated by means of input-output systems. The breakdown of the consumption fund depends on the number of sectors and branches that are included in the input-output tables, which vary between 29 and 70 items. The pattern of demand in the years preceding the new plan period serves as the basis for working out the first estimates. The latter are arrived at through extrapolation (in constant and assumed current prices) based on elasticity coefficients (relative to both income and prices) obtained by means of regression and trend analysis [31] and derived from the time series and the cross section data from the family budgets.[32] A refined version of the plan is elaborated subsequently after future changes in the above indicators have been estimated.

The third stage consists in balancing the estimates of global demand and the demand for various groups of commodities and services against corresponding supplies. This is in fact an input-output procedure.[33] In the Leontief open model, consumption vectors are multiplied with the inverted matrix $[X = (1 - A)^{-1}y]$ which gives both the direct and indirect effects of consumers' demand on output and required supplies. Very often this procedure is supplemented with some, but very few, partial balances, especially of the products which are considered as staple, such as wheat, meat, etc. After this balancing has been completed, the needs for and the capacities to increase supplies are known. Needs and capacities are then alternatively adjusted, so that the correction of all previous (sometimes tentative) assumptions are made.

However, as already stated, the income and consumption plans are only indicative. In an economy increasingly characterized by decentralized decisions which, within the existing institutional framework, are based on the anticipated behaviour of the market, such plans are mainly called to provide guidance for government policies aiming at the maintenance of market stability. The latter implies a parallel increase in incomes and supplies, which should be ensured partly by the institutional set-up but partly also by the active use of various policy instruments. Among the institutional factors, the remuneration and tax systems, together with the system of price formation, play a crucial role; among the policy instruments, credit and price policies are the most important.

It has already been indicated that full observance of the rule according to which increases in wages and in farmers' incomes should not exceed the rise of productivity is vital for the proper functioning of the Yugoslav system (it ensures the achievement of a certain parallelism in the growth of income and supplies).[34] However, the observance of this rule cannot be taken for granted in a highly decentralized economy. Departures from this rule have occurred more than once, thus calling for interventions by the authorities. Moreover, between 1962 and 1964 the Government itself deliberately took a rather liberal attitude towards wage increases with a view to reducing somewhat the high investment ratio, which had given rise to strong inflationary pressures. Nevertheless, leaving aside such situations which may be regarded as exceptional or as a consequence of the fact that the system had not yet been worked out in all its etails, the Yugoslav system has a rather important dvantage: wage increases (as well as increases in in- omes) are not *ex ante* commitments. The income of vage- and salary-earners is not known before the expira- ion of a given accounting period. Provided that the omputations made at the enterprise level are correct, he wage increases reflect the already achieved increases n productivity.

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[30] Disposable income is projected along two independent lines, i.e. according to the revenue and expenditure sides of national income accounts. The revenue plan (prepared for the whole economy, but also broken down according to the socio-economic sectors) contains the items indicated in Table 12.1, and it is based on the expected growth of output, employment, productivity and wages. The flows of disposable income are also planned so that finally "the fund for personal consumption" and individual savings are arrived at. The planning of income by means of the "expenditure method" consists in relating the results obtained on the revenue side with the plan of consumption expenditure and of making the necessary adjustments. In this way, a link is established between money income and expenditure (and also supplies) with savings as the balancing item.

[31] The methods of regression analysis are used particularly for the analysis of inter-relationships between the money and commodity flows. The functions which are considered as the most suitable for working out the different items of total consumption are: $y = a + b \log x$, and $\log y = a + b \log x$ (y stands for consumption and x for income). The first equation is found to be suitable for the calculations concerning the change in the demand for food products relative to the changes in income, while the second formula is found suitable for the calculation of the demand for manufactured consumers' goods and services.

[32] When projecting the change in the structure of consumption, the data from family budgets are preferred to data from time series, for the following reasons. First, family budgets are more suitable than time series for regression analysis: their income span is larger, they are less aggregative and they permit an insight into the peculiarities of demand within the same income groups (i.e. by different types and sizes of households and different strata of population). Secondly, they attenuate the problem of shortages in supplies of different products and the problem of new products, which are rather acute in time series. Thirdly, they are easier to handle because they imply stable relative prices, while time series work with current prices. Fourthly, regular surveys of family budgets also provide the possibility of computing the time series for the demand structure of different groups of population. Fifthly, they permit the study of the influence on the change in the consumption structure of factors other than income and prices, such as the size of family, the age structure, shifts in population structure, regional differences, etc. The assumption that people assume the habits of a higher income group as soon as they enter that group — the major weakness of the estimates based on family budgets — is not unrealistic for Yugoslavia. This is because a rapid growth in income, and large shifts in population, have resulted in people often not staying in one income group long enough to acquire the habits of that group.

[33] The method of balancing has undergone a considerable change. First, balances of demand for, and supply of, individual products were used, but since they could not be integrated into a single scheme, indicating the flows of money and commodities, this method has been used to a limited extent only. It was replaced by a simple but integrated matrix containing in the rows total demand, broken down by various items (such as indicated in Tables 12.17 and 12.18) and in the columns the supplying sectors. In recent years more thorough input-output methods have been applied.

[34] The major element of wage control in the socialist sector is the limitation of wage increases to the growth of productivity (see page 11); the cadastral income-tax ensures that the same rule is applied to the growth in agricultural income, which may fluctuate according to harvest, though not in proportion since harvests influence prices also; in non-productive services wages are paid out of the budget and, therefore, are related to revenues.

However, it is rather obvious that under a remuneration ystem of this kind, even if perfectly elaborated, the problem of partial equilibrium depends greatly on the behaviour of the income increment, i.e. the part of the ncome increment devoted to consumption. If a significant portion of the additional effective demand tends to be concentrated on items where, for one reason or another, upplies cannot be adequately expanded in the short un, partial disequilibrium of varying proportions will nevitably ensue. There is nothing in the system itself to prevent such and similar occurrences, and it is up to the Government to bring about the necessary corrections by means of various policy measures. However, it should lso be pointed out that the mechanism of scarcity prices, et in motion by such disequilibria, are of no concern to he Government. The scarcity prices are part of the present institutional set-up, and they are considered to play an important role in the allocation of investment esources as determined by the changes in consumer preferences.

It would be difficult to say whether the policy nstruments at this stage are sufficiently elaborated so as o provide the Government with a set of tools which vould be able to cope with any possible situation in the hort run. Nevertheless, the existing instruments seem powerful enough to influence effectively the distribu- ion of the enterprise's income as well as the level of consumption expenditure of the various strata of the population.

First of all, as indicated in one of the previous sections, credit policy has come to play an important role in the decisions of the workers' councils concerning the distri- bution of the enterprise's income between wages and nvestment. The effects of the credit policy are based on he fact that enterprises ought to self-finance the bulk of their needs for investments in fixed and working capital. Therefore, credit policies can closely influence he rates at which their incomes are allocated for different purposes. As proved by the developments following the 1965 economic reform, the reaction of the workers' councils to the introduction of restrictive credit policies has been both fairly rapid and significant, although it cannot be assumed that the workers' councils would mmediately react to any change in credit policies. The capacity of enterprises to raise their income in an inflationary situation may also be limited by a temporary partial, or even total (as in the beginning of 1965), price freeze. Normally, price control in Yugoslavia is selective, and the capacity of enterprises to raise prices is also limited by the increasing degree of openness of the Yugoslav economy and the occasional reductions that have been made in the degree of protection, which intensifies competition on the Yugoslav market. Owing to this fact, price control is increasingly limited to the non-exposed sectors. Another line of action open to the authorities is the manipulation of hire-purchase credits. In view of the large percentage of expenditure on consumer durables financed by credits, changes in credit conditions can affect demand for such goods to a very considerable extent. This line of action is tending to gain in importance in view of the high income-demand elasticity of durable consumer goods.

In addition to the policy measures above, which directly affect the level of nominal income, the authorities are in a position to limit or raise the purchasing power of personal income by manipulating the turnover tax levied at the retail trade level. The turnover tax is graduated, so that changes in relative rates can also influence the demand for particular products.

The Government also has the power to influence short-run developments on the supply side. The gradual liberalization of imports, the effect of which can be magnified by short-run changes in the allocation of foreign currencies, is an effective tool for reducing bottlenecks in domestic supplies. Similar results can be obtained by releasing stocks of the various commodities held by the Government.

The level of farmers' consumption expenditure can be effectively influenced by manipulating the conditions and the volume of credit extended for the purchase of current inputs and for investment purposes.[35] Changes in credit conditions for housing will also affect the levels of consumption expenditure of the wage- and salary-earners. The volume of tax proceeds levied on farm income may also be adjusted in case of a major change in the level of agricultural prices, although the cadastral income-tax cannot be viewed as a short-term policy instrument.

The non-productive services (education, health, administration, etc.) are financed by the respective budgets which are normally balanced. However, a problem would arise if the budgets were not properly balanced or (as was the case in 1964 and the first half of 1965) if the expenditures automatically follow an unexpected rise in revenues which is due to an inflationary situation.

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[35] Such credits extended by the co-operatives, which, in turn, borrow from the National Bank, amount to roughly one-third of total private farmers' investment in fixed capital and expenditures on inputs.

12.6. LONG-TERM ISSUES OF INCOMES POLICIES IN YUGOSLAVIA

The preceding section has shown that the Yugoslav authorities are inclined to regard an incomes policy primarily as a means for stimulating productivity and efficiency, and also for ensuring a certain savings ratio and the stability of the domestic market and a certain position in the balance of payments. However, a few more specific issues concerning incomes policies have been raised of late, and some others are not unlikely to arise in the near future.

One of the major issues which seems to preoccupy the Government at this stage is the establishment of a more adequate price of labour. There is a more or less general feeling in the country that the high investment ratio, which contributed greatly to the rapid economic growth in the past, is no longer justifiable on economic and social grounds. The share of national income allotted to wages is considered to be too low, with adverse effects on economies of labour inputs and rationalization of output.

The maintenance of low wages, which induce enterprises to expand output by relying on additional employment rather than on the growth of productivity, is said to be in open contradiction with the Government policy of basing economic growth increasingly on productivity. This unsatisfactory state of affairs had, in fact, induced the Government to inaugurate the already-mentioned 1962-1964 policies, when wages were allowed to rise faster than productivity. These policies, which together with too fast a growth of investments had been partly responsible for the inflationary pressure which developed during this period, were terminated following the 1965 economic reform. However, a new move in the same direction is expected in the 1966-1970 plan period. According to the plan, the present investment ratio will be gradually reduced and the share of the national income going to wages increased correspondingly. In order to avoid any adverse effect of a declining investment ratio on the rate of growth of the economy, great efforts will have to be made to accelerate the growth of productivity.

Another aspect of this problem is a more adequate price of skilled labour. This raises the problem of wage differentials by skill.

It is generally considered that the present range is not wide enough to stimulate effectively highly skilled labour. In 1964, the maximum ratio between the highest and lowest wages (comprising salaries) amounted to 7:1, but in a large number of enterprises it did not exceed 4:1. Highly competent and efficient personnel are not yet sufficiently stimulated to fully utilize their talents and skills, and there is an increasing tendency for technical staff and skilled workers to seek employment abroad. This unsatisfactory state of affairs contributes to the pressure for a change in the distribution of the national income, i.e. for a larger proportion of the labour share in the latter.

Another issue, which has not yet been officially raised, is the absence of a rather well-defined wage structure, by sectors and branches of industry. It has already been emphasized that the Yugoslav system of remuneration conceived to promote productivity by individual enterprises (and even by individual workers) tends to introduce a large variation in wage levels within each sector and each branch of industry. Wages within the same branch tend to vary (often quite considerably) from one enterprise to another, reflecting the differences in technology, overheads, skill patterns, etc.[36] Under such conditions it is virtually impossible to establish a relatively defined wage structure in the economy. The absence of such a structure of wages, however, may have negative consequences for the allocation of investment resources since an efficient allocation mechanism presupposes well-established cost relationships (at least in shorter intervals of time) among the various sectors and branches. This problem does not seem to have worried the authorities in the early stages of elaboration of the remuneration system since the main consideration at that time had been to develop incentives, which were thought to be able, at that stage, to more than outweigh diseconomies brought about by other factors. Moreover, the decentralization of the economy had not then reached the present proportions, and the role of the central authorities in the allocation of investment was still rather significant. However, the importance of establishing a relatively defined wage structure is likely to increase in the coming years, and it may well be that some modifications of the present remuneration system will have to be made. A combination of a system of minimum basic wages, determined for individual sectors and branches, with the principle according to which final wages ought to depend on the productivity of individual enterprises, may prove to be a possible line of action.

The sectoral branchwise wage differentials continue, on the whole, to be viewed favourably. It is generally argued that such differentials tend to direct labour towards the more productive enterprises while stimulating the less productive ones to invest more in the improvement of their local conditions. However, it is also said that further refinements of productivity criteria might be necessary in order to eliminate the influence on wages of factors which are not directly related to changes in productivity. At the same time, there has been much discussion about policies towards regional wage differentials which, under Yugoslav conditions, often tend to be linked with the sectoral ones. Regional disparities in the past have been enhanced by the distorted price relatives and the multiplicity of foreign exchange rates which, as already indicated, tended to favour manufacturing industries compared with primary output. On the other hand, the recent economic reforms, and especially the 1965 reform, have done much to bring wage and productivity rates more closely into line, both by regions and by individual sectors. However, it remains to be seen whether the efforts of the Government to eliminate various distortive factors had proceeded far enough. Also, the Government will have to watch closely the change in price relatives in future so as to ensure the coherence between branchwise and regional wage levels and productivity levels.

Another problem which has been discussed on various occasions is the possible cost-push effect of the wage policies of the less efficient enterprises. As already mention-d, in order to prevent the exodus of their highly-skilled ersonnel, these enterprises are often compelled to pay o the latter wages which do not reflect their real possibili- es. This policy, it is said, may tend to widen the wage ifferentials beyond the limit which the less-skilled mem- ers of the working collectives are prepared to accept, so nat they, in turn, are likely to press for wage increases rrespective of their actual contribution to the enterprise's erformance and thus set into motion the cost-push nechanism. Under present circumstances this problem nay not seem particularly important — partly because of he limited possibilities open to the less efficient enter- rises to increase the wages of the bulk of the working ollective unless based on corresponding productivity ncreases, and partly also because of the highly elastic upply of unskilled labour (especially after the introduc- ion of deflationary policies following the 1965 economic eform). Moreover, the growing competition between the fficient and the less efficient enterprises in the domestic narket, combined with the increasing openness of the Yugoslav economy, tends to limit the scope of the less fficient economic units to resort to price increases. However, this problem could raise difficulties should the present situation on the labour market change at some time in the future.

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[36] It may generally be said that such a system can adversely affect the allocation of capital resources as between different enterprises, since it tends to petrify the existing profit rates, which may not differ much. This point may have some relevance for Yugoslavia, especially since the price reform carried out in July of 1965 narrowed somewhat the difference in profit rates that had existed before. However, an estimate made by the Yugoslav planners proves that this disadvantage is considerably more than offset by the mentioned shifts in employment and consequent pressure on weak firms to invest and catch up with higher wages.

A few words might be added, perhaps, concerning the problem, discussed in the preceding section, of market equilibrium. The Yugoslav authorities are increasingly concerned with the maintenance of economic stability. This concern is amplified by the fact that the position of the balance of payments is increasingly dependent on the changes in costs in Yugoslavia. Despite the corrective actions of the Government which are rendered possible by the various economic policy measures, there is a more or less general feeling that a greater degree of foreign trade liberalization will be needed in order to ensure equilibrium between supply and demand in particular sectors of consumption and services. Moreover, this would also broaden the scope of foreign competition and thus tend to check the increase in wage costs, or rather to reduce total costs in a number of industries which in the past have benefited unduly from a sheltered market and which have consequently given little thought to competitiveness in foreign markets.

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